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DEPARTMENT OF THE NAVY
David B. DeMars, Lead Remedial Project Manager
Southwest Division Naval Facilities Engineering Command
San Diego, California

FINAL
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B HUNTERS POINT SHIPYARD SAN FRANCISCO, CALIFORNIA

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Prepared By

TETRA TECH EM INC.
135 Main Street, Suite 1800
San Francisco, California 94105
(415) 543-4880

Thomas Shoff, Project Manager

CONTENTS

FIGURES

Figure

TABLES

Table

ABBREVIATIONS, ACRONYMS, AND SYMBOLS

CAP	Corrective action plan
CLEAN	Comprehensive Long-Term Environmental Action Navy
CLP	Contract Laboratory Program
COPC	Chemical of potential concern
CTO	Contract task order
DI	Deionized
EPA	U.S. Environmental Protection Agency
HGAL	Hunters Point Shipyard groundwater ambient level
HPS	Hunters Point Shipyard
IR	Installation Restoration
LUFT	Leaking underground fuel tank
MS/MSD	Matrix spike/matrix spike duplicate
µg/L	Microgram per liter
Navy	U.S. Department of the Navy
NAWQC	National Ambient Water Quality Criteria
±	Plus or minus
PAH	Polynuclear aromatic hydrocarbons
PCB	Polychlorinated biphenyl
POC	Point-of-compliance
PRC	PRC Environmental Management, Inc.
QAPP	Quality assurance project plan
QA/QC	Quality assurance and quality control
RAMP	Remedial action monitoring plan
RI	Remedial investigation
RPD	Relative percent difference
SOP	Standard operating procedure
SWDIV	Southwest Division
SVOC	Semivolatile organic compound
TCE	Trichloroethene
TIZ	Tidally influenced zone
TPH	Total petroleum hydrocarbons
TtEMI	Tetra Tech EM Inc.
VOC	Volatile organic compound

1.0 INTRODUCTION

Tetra Tech EM Inc. (TtEMI) has prepared this quarterly groundwater sampling report for the second quarter of groundwater sampling, for the period of January through March 2000, at Parcel B, Hunters Point Shipyard (HPS) in San Francisco, California, for the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command, Southwest Division (SWDIV). Under the Comprehensive Long-Term Environmental Action Navy Contract No. N62474-94-D-7609 (CLEAN II), Contract Task Order (CTO) No. 0270, four consecutive quarters of groundwater monitoring will be conducted in accordance with the Parcel B remedial action monitoring plan (RAMP) (TtEMI 1999a). The first quarter of groundwater sampling was conducted in September 1999. The second quarter of groundwater sampling was conducted in January 2000. Resampling of monitoring wells where concentrations of any chemical exceeded trigger levels occurred during the third quarter of groundwater sampling, in April 2000. Concentrations reported in this document from the third quarter sampling event are unvalidated results. Figure 1 provides a facility location map.

During the remedial investigation (RI) of Parcel B (PRC Environmental Management, Inc. [PRC] 1996a), groundwater monitoring wells installed at Parcel B for the RI were sampled for possible chemical contaminants. Of these wells, 13 were sampled as part of this second quarter monitoring event. In addition, 11 new wells were installed and sampled in accordance with the Parcel B RAMP. Four of the new wells replace previously installed wells IR07MWS-2, IR07MWS-4, IR10MW31A1, and IR18MW21A; however, they retained the same well names, as documented in the Parcel B RAMP (TtEMI 1999a). Figure 2 presents the locations of the 24 groundwater monitoring wells sampled in this event and Installation Restoration (IR) site locations at Parcel B.

This report is organized into three sections. Following this introduction, Section 2 provides an overview of the sampling procedures and methods used during the second quarterly sampling event. Section 3 discusses the results from this sampling event as well as data quality. Appendix A summarizes the results from the second quarterly sampling event and compares the concentrations with trigger levels. Appendices B and C present monitoring well sampling sheets and chain-of-custody records for the sampling event, respectively. Appendix D includes a data validation report for the sampling event. References used to prepare this report are listed at the end of the report.

The groundwater monitoring program for Parcel B has the following purposes:

- To ensure trigger level concentrations are not exceeded along the inland edge of the tidally influenced zone
- To assess the effect of remedial actions involving contaminated soil on contaminant levels in A-aquifer groundwater at IR-07
- To evaluate the bayward migration of hazardous substances in A-aquifer groundwater from IR-06 and IR-10
- To assess the on- and off-site migration of hazardous substances in A-aquifer groundwater from the area northwest of IR-07 and IR-18
- To monitor the potential degradation of trichloroethene (TCE) to byproducts, including vinyl chloride, in A-aquifer groundwater at IR-10 and IR-24

Six types of groundwater monitoring wells completed in the A-aquifer are sampled in accordance with the Parcel B RAMP, as shown on Figure 2. The well types and naming conventions used are as follows:

- **Point-of-Compliance (POC) Monitoring Wells:** A total of eight wells at the POC, which is located at the high-tide line of the Parcel B tidally influenced zone (TIZ)
- **Sentinel Wells:** A total of seven wells located near the inland edge of the approximate 5-year buffer zone indicated on Figure 2
- **Post-Remedial-Action Monitoring Wells:** A total of five wells located within the TIZ to monitor the effectiveness of source control at IR sites
- **Volatile Organic Compound (VOC) Monitoring Well:** One well located near IR-10 to monitor the potential degradation of TCE to byproducts, including vinyl chloride
- **On- and Off-Site Migration Monitoring Wells:** Two wells along the western Parcel B boundary to evaluate on- and off-site migration of contaminants in A-aquifer groundwater
- **Utility Line Monitoring Well:** One well located near IR-06 to monitor the utility line

2.0 GROUNDWATER MONITORING PROCEDURES AND METHODS

Groundwater monitoring procedures for the second quarter groundwater sampling event include water level measurements and groundwater sampling as summarized below.

2.1 GROUNDWATER LEVEL MEASUREMENTS

Groundwater level measurements were collected on Monday, January 10, 2000, in accordance with the final Parcel B RAMP (TtEMI 1999a), the basewide quality assurance project plan (QAPP) (PRC

1996b), and the TtEMI standard operating procedure (SOP) for groundwater sampling (SOP No. 10, Revision 3), which is included in the Parcel B RAMP (TtEMI 1999a). Depth to water in each well was measured with an electric water-level indicator, and the total well depth was measured using a weighted steel tape. Groundwater level measurements were collected during a single day and over a 3-hour period in order to minimize tidal influence upon measurements.

2.2 GROUNDWATER SAMPLING PROCEDURES

Groundwater samples were collected from Monday, January 10, to Friday, January 14, 2000, in accordance with the final Parcel B RAMP (TtEMI 1999a), the basewide quality assurance project plan (QAPP) (PRC 1996b), and the TtEMI SOP for Groundwater Sampling (SOP No. 10, Revision 3), which is included in the Parcel B RAMP (TtEMI 1999a).

Before sampling, the wells were purged to remove standing water from each well, ensuring that the groundwater samples collected were representative of aquifer conditions. Wells with a small purge volume or with a slow recovery were purged and sampled using disposable Teflon bailers.

The groundwater temperature, pH, turbidity, specific conductance, dissolved oxygen, and salinity were measured before purging and then at regular intervals at a rate of two or more times per well casing volume removed. Parameters were recorded on monitoring well sampling sheets, which are included in Appendix B. A total of three well casing volumes was removed unless (1) the well went dry before this volume was purged or (2) the water parameters monitored during purging did not stabilize within stability criteria (Table 2 of SOP No.10 [TtEMI 1999a]). The depth to water was measured again after purging was complete, except at monitoring wells sampled using low-flow (minimal drawdown) groundwater sampling procedures.

When a well was purged dry before three well casing volumes were removed, VOC samples were collected after a sufficient volume of groundwater to enable sample collection had entered the well (SOP No. 10, Revision 3 [TtEMI 1999a]). Remaining samples were collected as soon as the well had recovered. Samples were collected in order of decreasing sensitivity to volatilization or to oxidation-reduction reactions. The preferred order of sample collection is summarized in Table 3 of the SOP (TtEMI 1999a).

Submersible pumps were used for purging of groundwater at all RAMP monitoring wells except at those that applied low-flow groundwater sampling procedures. If submersible pumps failed, disposable

bailers were used for purging of groundwater. Disposable bailers were used for groundwater sampling at all RAMP monitoring wells except at those that applied low-flow groundwater sampling procedures. Peristaltic pumps were used to purge and sample groundwater at monitoring wells that applied low-flow groundwater sampling procedures.

Groundwater samples analyzed for soluble metals were filtered in the field by collecting water in a laboratory-cleaned, unpreserved plastic bottle and filtering this water into a laboratory-cleaned, nitric-acid-preserved, 1-liter bottle. Groundwater samples analyzed for total metals were not filtered and were collected in a laboratory-cleaned, nitric-acid-preserved 1-liter bottle.

Water-level sounders used during water sampling activities were decontaminated before each use by washing the probe and the portion of the cable directly above the probe with deionized (DI) water and wiping it clean with a disposable paper towel. Submersible pumps were decontaminated before each use by washing each pump exterior with DI water and Liquinox soap solution, and then pumping a solution of DI water and Liquinox soap through the pump. The pump was then flushed with DI water. New polyethylene tubing for the submersible and peristaltic pumps was used at each well; therefore, decontamination of the tubing was not necessary.

Purged water was placed in U.S. Department of Transportation-approved 55-gallon drums and transferred to holding tanks located at the investigation-derived-waste area. Currently, the purge water from the first and second quarters of sampling is stored in a Baker tank located by Pump Station A on HPS. If purge water meets the criteria set by the City of San Francisco, it will be discharged into Pump Station A, which discharges to the Southeast Water Pollution Control Plant (Appendix C [TtEMI 1999a]). If purge water does not meet batch wastewater discharge requirements, the water will be treated and discharged once it has been determined to be satisfactory. Water treatment could take many forms depending upon the cause for failing discharge requirements and will be determined on a case-by-case basis. Historically at HPS, purge water from groundwater sampling events has met City discharge requirements.

2.3 LABORATORY ANALYSES

The groundwater samples were analyzed by Severn Trent Laboratories, Inc., of Colchester, Vermont, and Curtis & Tompkins, Ltd., of Berkeley, California, which are certified by the State of California and the Naval Facilities Engineering Service Center. The chain-of-custody record forms signed by the laboratories for the samples collected during the second quarterly sampling event are included as

Appendix C. Groundwater samples were analyzed using the following analytical methods, which are discussed in detail in the basewide QAPP (PRC 1996b):

- **CLP VOCs** (U.S. Environmental Protection Agency [EPA] OLM03.1): POC wells, sentinel wells, post-remedial-action wells, VOC well, on- and off-site migration wells, and utility line monitoring well
- **CLP Metals and Hexavalent Chromium** (EPA ILM04.0/EPA 7196): POC wells, sentinel wells, post-remedial-action wells, on- and off-site migration wells, and utility line monitoring well
- **TPH as Diesel** (California leaking underground fuel tank [CA LUFT] and EPA 8015): POC wells, sentinel wells, post-remedial-action wells, on- and off-site migration wells, and utility line monitoring well
- **TPH as Gasoline** (CA LUFT and EPA 8015): POC wells, sentinel wells, post-remedial-action wells, on- and off-site migration wells, and utility line monitoring well
- **CLP Semivolatile Organic Compounds (SVOC)** (EPA OLM03.1): on- and off-site migration wells and utility line monitoring well
- **CLP Pesticides and Polychlorinated Biphenyls (PCB)** (EPA OLM03.1 modified): on- and off-site migration wells and utility line monitoring well

In addition, groundwater samples collected from wells IR10MW33A, PA50MW01A, IR10MW31A1, and IR10MW28A were analyzed using the CLP low-level VOC method (EPA OLM02.0) in order to obtain low detection limits for the potential TCE degradation product vinyl chloride.

3.0 SECOND QUARTER GROUNDWATER SAMPLING RESULTS

The following sections discuss groundwater levels, analytical results, data quality, and deviations from the QAPP or Parcel B RAMP for samples collected from the 24 wells sampled during the second quarter sampling event.

3.1 GROUNDWATER LEVELS

Groundwater level data is collected during every quarterly sampling event. Groundwater level measurement procedures are discussed in Section 2.1 of this report. Water level measurements are summarized in Table 4, and water table potentiometric contours are provided on Figure 3.

Groundwater generally flows in a northeasterly direction toward San Francisco Bay. Data from on- and off-site migration wells suggest groundwater flows from off site to on site (north to south). There is an

apparent mound near monitoring well IR06MW45A. Groundwater tends to flow radially away from the center of this area. In IR-25, on the southern side of IR06MW45A, groundwater appears to be flowing in a southern and southeastern direction. On the eastern side, groundwater appears to flow toward the southeast. On the northern side, groundwater flows toward the bay.

Compared with the first quarter water levels, the second quarter's groundwater levels had decreased by approximately 1 to 3 inches. This decrease in groundwater storage and water levels is to be expected at the beginning of the wet season, which approximately begins in January.

3.2 ANALYTICAL RESULTS

This section summarizes analytical results for the second quarterly sampling event, which was conducted from January 10 to January 14, 2000. Analytical results for the second quarterly sampling event are presented in Appendix A of this report.

The trigger levels used for the various well types are summarized in Table 2, and the specific trigger levels by chemical for each well type are presented in Table 3.

Results for manganese, nickel, and thallium from POC monitoring well IR26MW41A exceeded trigger levels during the first-quarter sampling event; however, the second-quarter results for those metals did not exceed the trigger levels. Results for chromium from POC monitoring well IR07MWS-4 exceeded the trigger level in both the first- and second-quarter sampling events. Trigger levels were exceeded for barium, chromium, and zinc during the second quarterly sampling event in samples collected from six POC monitoring wells, four post-remedial-action monitoring wells, and one on- and off-site migration monitoring well; however, the results of third-quarter sampling (conducted between April 25 and May 2, 2000) for those metals did not exceed trigger levels. Although, third-quarter sampling results reported in this document have not been validated.

Results for each type of well that contained chemical concentrations exceeding trigger levels during the second quarterly sampling event are discussed further below and are summarized in Table 5. Figure 4 presents analytical results for groundwater monitoring wells that exceeded trigger levels.

3.2.1 Point-of-Compliance Monitoring Wells

A total of eight POC monitoring wells were sampled during the second quarterly event. These wells are located near the inland edge of the TIZ.

Samples collected from the following wells exceeded the screening criteria for metals, as summarized in Table 5:

- Well IR07MWS-2 for zinc (112 micrograms per liter [μg/L])
- Well IR07MWS-4 for barium (716 μg/L), chromium (16.4 μg/L), and zinc (227 μg/L)
- Well IR07MW19A for barium (552 μg/L) and zinc (134 μg/L)
- Well IR10MW31A1 for barium (705 μg/L) and zinc (162 μg/L)
- Well IR26MW45A for barium (744 μg/L) and zinc (200 μg/L)
- Well PA50MW01A for zinc (92 μg/L)

The trigger levels for barium and chromium, which are based on the HPS groundwater ambient level (HGAL), are 504 μg/L and 15.7 μg/L, respectively. The trigger level for zinc, which is based on the National Ambient Water Quality Criteria for the protection of saltwater aquatic life (NAWQC), is 81 μg/L.

Barium and zinc concentrations increased by an order of magnitude since the previous quarterly sampling (September 1999) and the RI sampling, which occurred in 1991 and 1992. Chromium concentrations have decreased since the last sampling round but are still higher than concentrations detected during RI sampling. However, chromium concentrations that exceeded trigger levels are consistent with variations in ambient conditions of HPS groundwater. Table 5 presents historical sampling results for the analytes exceeding trigger levels.

Chromium was detected at 23.6 μg/L (soluble chromium) and 24.5 μg/L (total chromium) at monitoring well IR07MWS-4 during the first quarterly sampling event. These concentrations were estimated due to high-bias interference from high sample concentrations of calcium and magnesium. During the second quarterly sampling event, chromium was detected at 16.4 μg/L, exceeding its trigger level of 15.7 μg/L. Chromium concentrations were less than its trigger level during the third quarterly sampling event in April 2000. There is no NAWQC concentration for chromium, so the trigger level is based on the HGAL. The fact that chromium slightly exceeds its trigger level is likely an artifact in the methodology used to calculate ambient levels, which was the 95 percent upper confidence limit on the 95th percentile of the distribution using the nonparametric distribution formula. Statistically, 5 percent of the ambient population will exceed the calculated ambient level. Historical trends of chromium at monitoring well IR07MWS-4 are shown in Table 5.

Resampling of POC monitoring wells with concentrations that exceeded trigger levels occurred as part of the third-quarter groundwater sampling event in April 2000. Barium, chromium, and zinc concentrations at POC monitoring wells were less than their respective trigger levels during the third-quarter sampling event.

Concentrations of manganese, nickel, and thallium at monitoring well IR26MW41A exceeded their respective trigger levels during the first-quarter sampling event. However, concentrations of these metals were all less than trigger level values during the second-quarter sampling event, as summarized below.

IR26MW41A QUARTERLY SAMPLING RESULTS

Constituent	Trigger Levels (µg/L)	First-Quarter Sampling Event Results (µg/L)	Second-Quarter Sampling Event Results (µg/L)
Manganese	8,140	**13,900**	1,730
Nickel	96.5	**105**	36.5
Thallium	13	**59.7**	5.5

The second- and third-quarter concentrations of manganese, nickel, and thallium are also consistent with historical results collected during the RI. Consequently, the elevated concentrations of these metals exhibited during the first-quarter sampling event do not appear to be a continuing issue.

3.2.2 On- and Off-Site Migration Monitoring Wells

A total of two on- and off-site migration monitoring wells were sampled during the second quarterly event. These wells are located along the western Parcel B boundary.

Barium (637 µg/L) and zinc (178 µg/L) concentrations exceeded their respective trigger level values in samples collected from monitoring well IR07MW28A. The concentrations of barium and zinc at monitoring well IR07MW28A have increased by an order of magnitude since the previous quarterly sampling and the RI sampling, which occurred in 1991 and 1992 (see Table 5).

Resampling of IR07MW28A occurred as part of the third-quarter groundwater sampling event in April 2000. Barium and zinc concentrations at IR07MW28A were less than their respective trigger levels during the third-quarter sampling event.

Aroclor-1221 was reported as nondetect at a quantitation limit of 0.2 µg/L in the sample collected from well IR07MW28A. The quantitation limit of 0.1 µg/L for Aroclor-1016, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260 met the trigger level for PCBs; however, the quantitation limit for Aroclor-1221 could only be lowered to 0.2 µg/L due to limitations of the analytical method (EPA OLM03.1 modified). The quantitation limit only slightly exceeds the trigger level for Aroclor-1221 (0.19 µg/L). However, a result of 0.19 µg/L could have been detected in the sample because the laboratory reports results less than the quantitation limit but greater than the method detection limit, if detected in the sample.

The laboratory's MDLs for Aroclor-1221 for the regular Contract Laboratory Program (CLP) Pesticide/PCB method range from 0.15 to 0.18 µg/L. The MDL for the modified CLP Pesticide/PCB method is equal to or less than 0.18 µg/L, which is less than the trigger level for Arolcor-1221. In addition, the laboratory reports all results detected at concentrations greater than one-half the quantitation limit. Therefore, Aroclor-1221 is not considered to exceed its trigger level.

3.2.3 Post-Remedial-Action Monitoring Wells

A total of five post-remedial-action monitoring wells were sampled during the second quarterly event. The wells are located in (1) the area just northeast of remediation area 7-1 (wells IR07MW21A, IR07MW24A, and IR07MW25A), and (2) the area in the vicinity of where nickel was detected above the HGAL, which is northeast of remediation areas 7-3 and 7-5 (wells IR07MW20A1 and IR07MW26A). The purpose of collecting data for the five wells is to evaluate the effectiveness of contaminant source control on groundwater quality, which will be summarized in the annual report.

Samples collected from the following wells exceeded the screening criteria for metals:

- Well IR07MW20A1, for barium (635 µg/L) and zinc (204 µg/L)
- Well IR07MW21A1, for barium (720 µg/L) and zinc (184 µg/L)
- Well IR07MW24A, for barium (679 µg/L) and zinc (156 µg/L)
- Well IR07MW26A, for barium (697 µg/L) and zinc (198 µg/L)

Barium and zinc concentrations have increased by an order of magnitude since the previous quarterly sampling and the RI sampling that occurred in 1991 and 1992 (see Table 5).

3.2.4 Sentinel Wells

A total of seven sentinel wells were sampled during the second quarterly event. These wells are located near the inland edge of the approximate 5-year buffer zone indicated on Figure 2. No trigger levels were exceeded during this event.

3.2.5 VOC Monitoring Well

One VOC monitoring well was sampled during the second quarterly event. The monitoring well, IR10MW33A, is located near IR-10 to monitor the potential degradation of TCE to byproducts, including vinyl chloride. VOC results from monitoring wells IR10MW28A, IR10MW31A1, IR61MW05A, and PA50MW01A are used to assess the potential migration of TCE and its byproducts. Historical trends of TCE, cis-1,2-dichloroethene, 1,2-dichloroethene, and vinyl chloride are presented in Table 6.

In the second quarterly sampling event, trichloroethene, trans-1,2-dichloroethene, and cis-1,2-dichloroethene were detected at concentrations of 23 µg/L, 0.3 µg/L, and 13 µg/L, respectively. Vinyl chloride was not detected at the quantitation limit (0.5 µg/L). Vinyl chloride was not detected at IR10MW33A during the first two rounds of quarterly groundwater monitoring. In addition, TCE, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride have not been detected during the past two quarterly groundwater sampling events at monitoring wells IR10MW31A1 and PA50MW01A, which are downgradient from IR10MW33A, as summarized in Table 6. No numerical trigger levels were exceeded.

3.2.6 Utility Line Monitoring Well

One utility line monitoring well was sampled during the second quarterly event. The well, IR06MW42A, is located near IR-06 to monitor the utility line. No trigger levels were exceeded.

3.3 DATA QUALITY

Standard quality assurance and quality control (QA/QC) techniques in the field and in the laboratory ensured the quality of the data collected during this sampling event. Field QA/QC consisted of collecting field duplicate pairs, equipment rinsate blanks, trip blanks, and matrix spike/matrix spike duplicates (MS/MSD) in accordance with the QAPP (PRC 1996b) referenced in the Parcel B RAMP (TtEMI 1999a). Two field duplicate samples were collected for the 24 wells sampled, for a frequency

of 10 percent as specified in the QAPP. Field duplicate results for monitoring wells IR07MW28A and IR07MWS-2 are reported in Appendix A. Two equipment rinsate blanks were collected per crew for the 5-day sampling event, also as specified in the QAPP. Trip blanks containing analyte-free water were prepared by the laboratory and included in each of seven coolers containing samples for CLP VOC analysis. MS/MSD samples were collected at a frequency of one for each of the three sample delivery groups, as specified in the QAPP.

The data were validated by ETHIX of Modesto, California, in accordance with procedures presented in the following documents:

- "USEPA CLP National Functional Guidelines for Organic Data Review" (February 1994)
- "USEPA CLP National Functional Guidelines for Inorganic Data Review" (February 1994)
- TtEMI "Data Validation Guidelines for CLP Organic Analyses"
- TtEMI "Data Validation Guidelines for CLP Inorganic Analyses"
- TtEMI "Data Validation Guidelines for non-CLP Inorganic and Physical Analyses" (March 1998)
- "TtEMI CLEAN II Analytical Services Statement of Work" (May 1999)

No data was rejected. The data validation reports for the second-quarter event are included in Appendix D. The data quality per analysis type is summarized in Appendix A of each data validation report. An evaluation of the field duplicate precision is included in the data validation reports.

The data were examined to determine whether the barium, chromium, and zinc detected in groundwater samples at concentrations exceeding the trigger levels could be due to contamination introduced during field or laboratory procedures. The parameters reviewed are described in the following paragraphs.

Four equipment blanks were collected during this event to monitor sample collection and equipment decontamination procedures in the field. Three blanks were filtered, and the fourth blank was collected for both a dissolved (filtered) and total (unfiltered) metals analysis, to monitor sample collection procedures for the low-flow wells. Barium and chromium were not detected in any of the equipment blanks. The highest concentration of zinc in any of the equipment blanks was 2.3 µg/L, which is less than the POC screening criterion of 81 µg/L.

Results for instrument calibration blanks and preparation (method) blanks analyzed by the laboratory were examined in order to monitor laboratory procedures for potential sources of contamination. Barium was not detected in any of the blanks. The highest chromium concentration was 2.4 µg/L, well below the POC screening criterion of 15.7 µg/L. The highest zinc concentration was 6.5 µg/L, again well below the POC screening criterion.

Additional laboratory QC parameters were examined to identify any potential problems with the analyses for barium, chromium, or zinc. All matrix spike (MS) and laboratory control sample (LCS) (or blank spike) recoveries met the QC limits; recoveries ranged from 94 to 104 percent. Elevated concentrations of sodium and magnesium in some of the samples (for example, sodium and magnesium were detected in IR07MW19A at concentrations of 8,090,000 and 1,060,000 µg/L, respectively) may potentially interfere with metals analysis; however, examination of (1) the interference check samples analyzed by the laboratory to verify the laboratory's background interelement and correction factors, and (2) the serial dilution samples analyzed to determine potential physical or chemical interferences due to the sample matrix did not indicate any analytical problems for barium, chromium, or zinc.

In addition, calculations for barium, chromium, and zinc were spot-checked and determined to be correctly calculated. There were no dilutions, and hence no errors due to dilution calculations.

In conclusion, the data did not show any evidence of barium, chromium, or zinc contamination resulting from field or laboratory procedures. Further investigation is necessary to identify the potential sources of those constituents. A third-quarter sampling event is planned and may help identify areas for additional investigation at the site.

3.4 DEVIATIONS FROM THE QUALITY ASSURANCE PROJECT PLAN OR PARCEL B REMEDIAL ACTION MONITORING PLAN

The following deviation from the Parcel B RAMP (TtEMI 1999a) was noted:

- The CLP pesticides/PCB analytical method was modified in order to meet the NAWQC screening criterion of 0.1 µg/L for PCBs; however, the quantitation limit for Aroclor-1221 could not be lowered below 0.2 µg/L due to limitations of the analytical method (EPA OLM03.1 modified).

3.5 CONCLUSIONS

Barium, chromium, and zinc concentrations exceeded trigger levels in 11 of 24 Parcel B RAMP monitoring wells. Historically, barium and zinc concentrations have not exceeded trigger levels in groundwater samples collected from these 11 wells, as summarized in Table 5. Chromium concentrations exceeded the trigger level during both of the first two quarters of sampling (September 1999 and January 2000), and are higher than the concentrations exhibited during the RI. Unvalidated results for barium, chromium, and zinc did not exceed trigger levels during the resampling event, which was included with the third-quarter sampling event in April 2000.

The Navy believes there is insufficient data to conclude that barium, chromium, and zinc concentrations are indicative of a continuing problem at HPS. Additional sampling rounds are necessary to assess trends in the concentrations of metals in groundwater at HPS.

The trigger levels for barium and chromium are based on the HGAL. The trigger level for zinc is also similar to the HGAL. Trigger levels are intended as screening tools to indicate that additional investigation may be necessary and are not intended as a concentration level that would suggest remedial action is required. Furthermore, there is natural variation in the concentration of constituents considered to be "ambient." Chromium concentrations that exceed trigger levels may be the result of this natural variation.

As stated in the Parcel B RAMP, the Navy is required to take the following actions when concentrations are found to exceed their trigger levels:

- Inform the Base Realignment and Closure (BRAC) Cleanup Team (BCT) within 10 business days
- Resample the well within 15 business days and analyze the sample for confirmation purposes
- Inform the BCT of the resampled results within 15 business days of receiving the results

The Navy notified the BCT of the second quarterly results that exceeded trigger levels on April 26, 2000. The BCT notification period was based on receipt of the validated results. In future quarterly sampling events, the notification period will commence once unvalidated results are received. The monitoring wells where concentrations exceeded trigger levels during the second-quarter event were resampled as part of the third quarterly sampling event, which occurred between Monday, April 24,

2000, and Tuesday, May 2, 2000. Unvalidated results were received on June 7, 2000. The BCT was notified of concentrations that exceeded trigger levels during the third-quarter monitoring event on June 21, 2000.

In accordance with the RAMP, if the resampled results confirm that the trigger levels have been exceeded, the Navy is to implement a response plan after discussing the issue with the agencies. The response plan may take several forms, depending on the degree to which the trigger level was exceeded and the time trend of analytical results, the specific contaminant involved, the perceived risk, and the nature of the populations or receptors potentially at risk (for example, human, ecological, or environmental).

Barium, chromium, and zinc concentrations at RAMP monitoring wells will be closely followed in future quarterly sampling events. The annual report will evaluate and summarize quarterly, semiannual, and annual monitoring results for the previous four quarters. The fourth-quarter groundwater sampling event is scheduled to begin on Wednesday, July 5, 2000.

REFERENCES

PRC Environmental Management, Inc. (PRC). 1996a. "Parcel B Remedial Investigation, Draft Final Report, Hunters Point Shipyard (HPS), San Francisco, California." June 3.

PRC. 1996b. "Basewide Quality Assurance Project Plan, HPS, San Francisco, California." Draft Final. May 24.

Tetra Tech EM Inc. (TtEMI). 1999a. "Final Remedial Action Monitoring Plan, Parcel B Remedial Action, HPS, San Francisco, California." July 2.

TtEMI. 1999b. "Draft Final Technical Memorandum, Nickel Screening and Implementation Plan, Hunters Point Shipyard, San Francisco, California." August 4.

TABLES

TABLE 1

SUMMARY OF WELLS SAMPLED AND ANALYSES PERFORMED

Monitoring Well Type	Well Identification Number	CLP VOC (OLM03.1)	CLP Metals (ILM04.0)	Hexavalent Chromium (EPA 7196A)	TPH-d (CA LUFT and EPA 8015)	TPH-g (CA LUFT and EPA 8015)	CLP SVOC (OLM03.1)	CLP Pesticides and PCBs (OLM03.1 modified)	CLP Low-Level VOA (OLM02.0)
Point-of-Compliance	IR26MW41A	X	X	X	X	X			
	IR46MW37A	X	X	X	X	X			
	IR10MW31A1	X	X	X	X	X			X
	IR26MW45A	X	X	X	X	X			
	IR07MW19A	X	X	X	X	X			
	PA50MW01A	X	X	X	X	X			X
	IR07MWS-2	X	X	X	X	X			
	IR07MWS-4	X	X	X	X	X			
Sentinel	IR07MW23A	X	X	X	X	X			
	UT03MW11A	X	X	X	X	X			
	IR61MW05A	X	X	X	X	X			
	IR10MW28A	X	X	X	X	X			X
	IR25MW17A	X	X	X	X	X			
	IR06MW45A	X	X	X	X	X			
	IR07MW27A	X	X	X	X	X			
Post-Remedial Action	IR07MW21A1	X	X	X	X	X			
	IR07MW20A1	X	X	X	X	X			

TABLE 1 (Continued)

SUMMARY OF WELLS SAMPLED AND ANALYSES PERFORMED

Monitoring Well Type	Well Identification Number	CLP VOC (OLM03.1)	CLP Metals (ILM04.0)	Hexavalent Chromium (EPA 7196A)	TPH-d (CA LUFT and EPA 8015)	TPH-g (CA LUFT and EPA 8015)	CLP SVOC (OLM03.1)	CLP Pesticides and PCBs (OLM03.1 modified)	CLP Low-Level VOA (OLM02.0)
Post-Remedial Action (cont.)	IR07MW24A	X	X	X	X	X			
	IR07MW25A	X	X	X	X	X			
	IR07MW26A	X	X	X	X	X			
VOC	IR10MW33A	X							X
On/Off-Site Migration	IR18MW21A	X	X	X	X	X	X	X	
	IR07MW28A	X	X	X	X	X	X	X	
Utility Lines	IR06MW42A	X	X	X	X	X	X	X	

Notes:

CLP	Contract Laboratory Program
CA LUFT	California leaking underground fuel tank
EPA	U.S. Environmental Protection Agency
PCB	Polychlorinated biphenyl
SVOC	Semivolatile organic compound
TPH-d	Total petroleum hydrocarbons as diesel
TPH-g	Total petroleum hydrocarbons as gasoline
VOC	Volatile organic compound
X	Indicates analysis performed

TABLE 2

SUMMARY OF TRIGGER LEVELS FOR PARCEL B GROUNDWATER SAMPLING RESULTS

Monitoring Well Type	Trigger Levels
POC Monitoring Wells	NAWQC or HGALs, whichever is higher; TPH trigger levels to be determined during CAP preparation
Sentinel Wells	10 times the associated trigger level for the POC monitoring wells
Post-Remedial-Action Monitoring Wells	Same as the POC monitoring wells
VOC Monitoring Well	No trigger levels; increase in vinyl chloride to be measured
On- and Off-Site Migration Monitoring Wells	Same as POC monitoring wells for well IR07MW28A; same as sentinel wells for well IR18MW21A
Utility Line Monitoring Well	Southeast Water Pollution Control Plant discharge requirements

Notes:

CAP Corrective action plan
HGAL Hunters Point Shipyard groundwater ambient level
NAWQC National Ambient Water Quality Criteria
POC Point-of-compliance
TPH Total petroleum hydrocarbons
VOC Volatile organic compound

TABLE 3

COMPARISON OF TRIGGER LEVEL CRITERIA

Constituent	POC, PRA, & On-/Off-Site Migration Well Trigger Level (µg/L) POC Wells and Post Remedial Action Monitoring Wells and On- and Off-Site Migration Well IR07MW28A	Sentinel & On-/Off-Site Migration Well Trigger Level (µg/L) Sentinel Wells and On- and Off-Site Migration Well IR18MW21A	Southeast WPCP Discharge Requirements (µg/L) Utility Lines Well
TPH-g and TPH-d	NA	NA	NA
PAH	300	3,000	NA
PCBs[a]	0.19	1.9	5,000[b]
1,2-Dichloroethene	22,400	224,000	NA
Trichloroethene	200	2,000	NA
Vinyl Chloride	55	550	200
Antimony	500	5,000	15,000[b]
Arsenic	36	360	4,000
Barium	504	5,040	100,000[b]
Beryllium	1.40	14	750[b]
Cadmium	9.3	93	500
Chromium	15.7	157	5,000
Chromium (VI)	NA	NA	5,000[b]
Cobalt	20.8	208	80,000[b]
Copper	28	280	4,000
Lead	14.4	144	1,500
Manganese	8,140	81,400	NA
Mercury	0.60	6	50

TABLE 3 (Continued)

COMPARISON OF TRIGGER LEVEL CRITERIA

Constituent	POC, PRA, & On-/Off-Site Migration Well Trigger Level (µg/L) POC Wells and Post Remedial Action Monitoring Wells and On- and Off-Site Migration Well IR07MW28A	Sentinel & On-/Off-Site Migration Well Trigger Level (µg/L) Sentinel Wells and On- and Off-Site Migration Well IR18MW21A	Southeast WPCP Discharge Requirements (µg/L) Utility Lines Well
Nickel	96.5	965	2,000
Silver	7.43	74.3	600
Thallium	13.0	130	7,000[b]
Zinc	81	810	7,000

Notes:

a PCBs applied to trigger level: Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

b Soluble Threshold Limit Concentration. California Code of Regulations, Title 22, Section 66261.24(a)(2)(A) (Tetra Tech, 1999)

DNAPL Dense nonaqueous-phase liquid

HGAL Hunters Point Shipyard groundwater ambient levels for metals in A-aquifer groundwater

NA Not applicable

NAWQC National Ambient Water Quality Criteria

PCB Polychlorinated biphenyl

POC Point-of-compliance

PRA Post-remedial-action

SVOC Semivolatile organic compound

TPH-d Total petroleum hydrocarbons as diesel

TPH-g Total petroleum hydrocarbons as gasoline

VOC Volatile organic compounds

WPCP Water pollution control plant

TABLE 4

SUMMARY OF WATER LEVEL MEASUREMENTS TAKEN JANUARY 10, 2000

Well ID Number	Depth to Groundwater (feet btoc)	TOC Elevation (feet above MSL)	Water Level Elevation (feet above MSL)
IR06MW42A	11.02	11.88	0.86
IR06MW45A	6.51	9.93	3.42
IR07MW19A	9.00	9.6	0.60
IR07MW20A1	8.56	9.65	1.09
IR07MW21A1	13.42	14.65	1.23
IR07MW23A	14.28	15.76	1.48
IR07MW24A	12.23	13.56	1.33
IR07MW25A	10.46	11.91	1.45
IR07MW26A	11.46	12.69	1.23
IR07MW27A	13.55	16.15	2.60
IR07MW28A	10.48	12.03	1.55
IR07MWS-2	11.27	12.71	1.44
IR07MWS-4	14.54	15.88	1.34
IR10MW28A	11.12	13.65	2.53
IR10MW31A1	9.29	10.34	1.05
IR10MW33A	8.09	10.25	2.16
IR18MW21A	15.69	17.62	1.93
IR25MW17A	8.53	10.28	1.75
IR26MW41A	7.09	10.12	3.03
IR26MW45A	7.20	8.28	1.08
IR46MW37A	7.73	9.56	1.83
IR61MW05A	7.87	10.13	2.26
PA50MW01A	8.27	9.14	0.87
UT03MW11A	7.69	9.93	2.24

Notes:

btoc Below top of casing

MSL Mean sea level

TOC Top of casing

TABLE 5

SECOND QUARTER RESULTS EXCEEDING TRIGGER LEVELS, WITH ASSOCIATED HISTORICAL RESULTS

	RI	RI	RI	First Quarter Event	Second Quarter Event	Third Quarter (Resampling) Event
IR07MW19A						
Sample Date	7/30/91	12/5/91	6/5/92	9/3/99	1/13/00	4/27/00
Barium	89.4	67.5	79.7	120	**552**	72.6
Zinc	7.3 ND	27.1	19.7	7.3 ND	**134**	1.5 ND
IR07MW20A1						
Sample Date	7/25/91	12/2/91	6/1/92	9/3/99	1/13/00	4/25/00
Barium	81.7	52	30.5	104	**635**	58.1
Zinc	7 ND	3.9 ND	16.5 ND	3 ND	**204**	1.5 ND
IR07MW21A1						
Sample Date	7/29/91	12/4/91	6/3/92	9/3/99	1/13/00	4/25/00
Barium	91.6	108	93.5	104	**720**	77.5
Zinc	13.2	6.2	16.5 ND	3 ND	**184**	3.0
IR07MW24A*						
Sample Date	NA	NA	NA	9/3/99	1/14/00	4/25/00
Barium				132	**679**	158
Zinc				3.8 ND	**156**	7.4
IR07MW26A*						
Sample Date	NA	NA	NA	9/2/99	1/14/00	4/25/00
Barium				237	**697**	136
Zinc				5.3 ND	**198**	1.5 ND
IR07MW28A*						
Sample Date	NA	NA	NA	9/2/99	1/14/00	4/26/00
Barium				120	**637**	102
Zinc				3.6 ND	**178**	26.3
IR07MWS-2						
Sample Date	7/26/91	12/5/91	6/3/92	9/3/99	1/13/00	4/25/00
Zinc	1.6 ND	6.1 ND	16.5 ND	3 ND	**112**	1.5 ND
IR07MWS-4						
Sample Date	7/25/91	12/2/91	6/1/92	9/1/99	1/13/00	4/25/00
Barium	92.4	82.7	67.4	58.4	**716**	10.7 ND
Chromium (soluble)	2.9	3 ND	2.5 ND	**23.6**	**16.4**	2.2 ND
Chromium (total)	NA	NA	NA	**24.5**	NA	NA
Zinc	15.4 ND	10.3	16.5 ND	6.2 ND	**227**	3.8
IR10MW31A1						
Sample Date	12/23/93	8/11/94	5/23/95	9/1/99	1/12/00	4/28/00
Barium	19.3	55.9	85.4	64.5	**705**	62.3
Zinc	6.4 ND	3.1 ND	11.1	3 ND	**162**	4.3

TABLE 5 (Continued)

SECOND QUARTER RESULTS EXCEEDING TRIGGER LEVELS, WITH ASSOCIATED HISTORICAL RESULTS

	RI	RI	RI	First Quarter Event	Second Quarter Event	Third Quarter (Resampling) Event
IR26MW45A*						
Sample Date	NA	NA	NA	9/1/99	1/12/00	4/26/00
Barium				149	**744**	109
Zinc				3.2	**200**	1.5 ND
PA50MW01A						
Sample Date	3/16/93	8/17/94	6/14/95	9/1/99	1/12/00	4/28/00
Zinc	6 ND	4.7 ND	11.1 ND	3 ND	**92**	1.5 ND

Notes: All concentrations are reported in micrograms per liter.
Third quarter (resampling) event concentrations have not been validated.
Bold font indicates concentration exceeds applicable trigger level.

* Monitoring well was installed in 1999; therefore, historical data is not available.

Trigger Levels:

Barium	504 µg/L (based on HGAL)
Chromium	15.7 µg/L (based on HGAL)
Zinc	81 µg/L (based on NAWQC)

HGAL	Hunters Point Shipyard groundwater ambient levels for metals in A-aquifer groundwater
NAWQC	National Ambient Water Quality Criteria for protection of saltwater aquatic life
NA	Not applicable
ND	Not detected. Concentration reported is the analytical detection limit.
RI	Remedial investigation

TABLE 6

HISTORICAL RESULTS AT MONITORING WELLS IN PROXIMITY TO IR-10 TRICHLORETHENE GROUNDWATER PLUME

	RI	RI	RI	RI	RI	RI	First Quarter Event	Second Quarter Event
IR10MW28A								
Sample Date	10/31/91	01/13/92	11/09/93	02/22/94	05/16/94	08/22/94	09/03/99	01/12/00
1,2-Dichloroethene (total)	5 ND	5 ND	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	1 ND	2 ND	1 ND	1 ND	3 ND	0.6
Trichloroethene	38	28	27	30	42	45	54	40
Vinyl Chloride	10 ND	10 ND	1 ND	2 ND	1 ND	1 ND	2 ND	1 ND
IR10MW31A1								
Sample Date	12/23/93	8/11/94	5/23/95	NA	NA	NA	09/03/99	01/12/00
1,2-Dichloroethene (total)	10 ND	10 ND	10 ND				NA	NA
cis-1,2-Dichloroethene	NA	NA	NA				1 ND	1 ND
Trichloroethene	10 ND	10 ND	10 ND				1 ND	1 ND
Vinyl Chloride	10 ND	10 ND	10 ND				0.5 ND	0.5 ND
IR10MW33A*								
Sample Date	NA	NA	NA	NA	NA	NA	09/03/99	01/12/00
1,2-Dichloroethene (total)							NA	NA
cis-1,2-Dichloroethene							10	13
Trichloroethene							19	23
Vinyl Chloride							0.5 ND	0.5 ND
IR61MW05A								
Sample Date	8/31/95	10/2/95	11/8/95	NA	NA	NA	9/3/99	1/13/00
1,2-Dichloroethene (total)	0.5 ND	0.5 ND	0.5 ND				10 ND	NA
cis-1,2-Dichloroethene	NA	NA	NA				NA	1 ND
Trichloroethene	0.5 ND	0.5 ND	0.5 ND				10 ND	1 ND
Vinyl Chloride	0.5 ND	0.5 ND	0.5 ND				10 ND	0.5 ND

TABLE 6 (Continued)

HISTORICAL RESULTS AT MONITORING WELLS IN PROXIMITY TO IR-10 TRICHLORETHENE GROUNDWATER PLUME

	RI	RI	RI	RI	RI	RI	First Quarter Event	Second Quarter Event
PA50MW01A								
Sample Date	3/16/93	8/17/94	6/14/95	NA	NA	NA	9/1/99	1/13/00
1,2-Dichloroethene (total)	10 ND	10 ND	10 ND				10 ND	NA
cis-1,2-Dichloroethene	NA	NA	NA				NA	1 ND
Trichloroethene	10 ND	10 ND	10 ND				10 ND	1 ND
Vinyl Chloride	10 ND	10 ND	10 ND				10 ND	0.5 ND

Notes: All concentrations are reported in micrograms per liter.

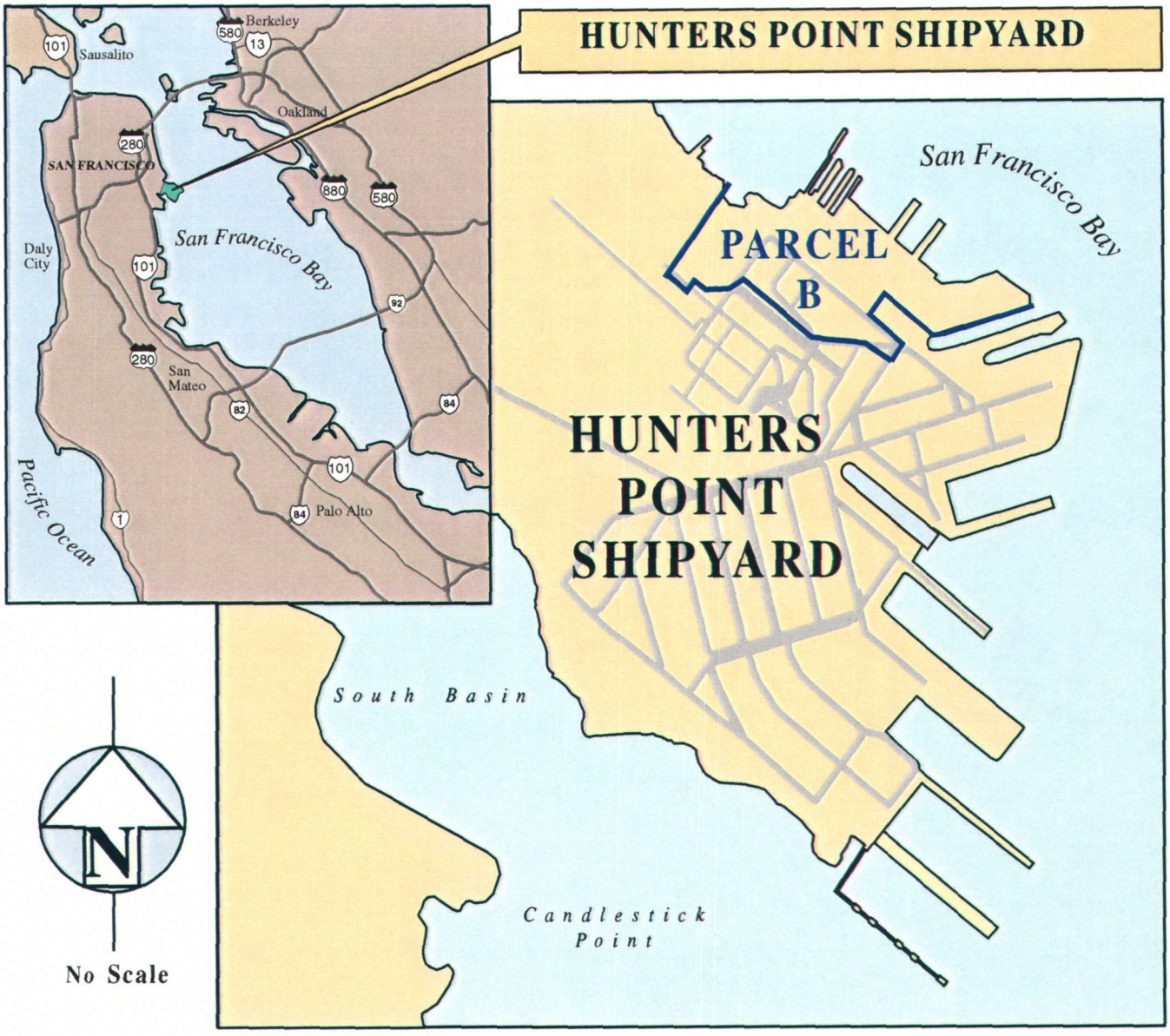
* Monitoring well was installed in 1999; therefore, historical data is not available.

Trigger Levels:

cis-1,2-Dichlorethene	22,400 µg/L
Dichloroethene (total)	22,400 µg/L
Trichloroethene	200 µg/L
Vinyl chloride	55 µg/L

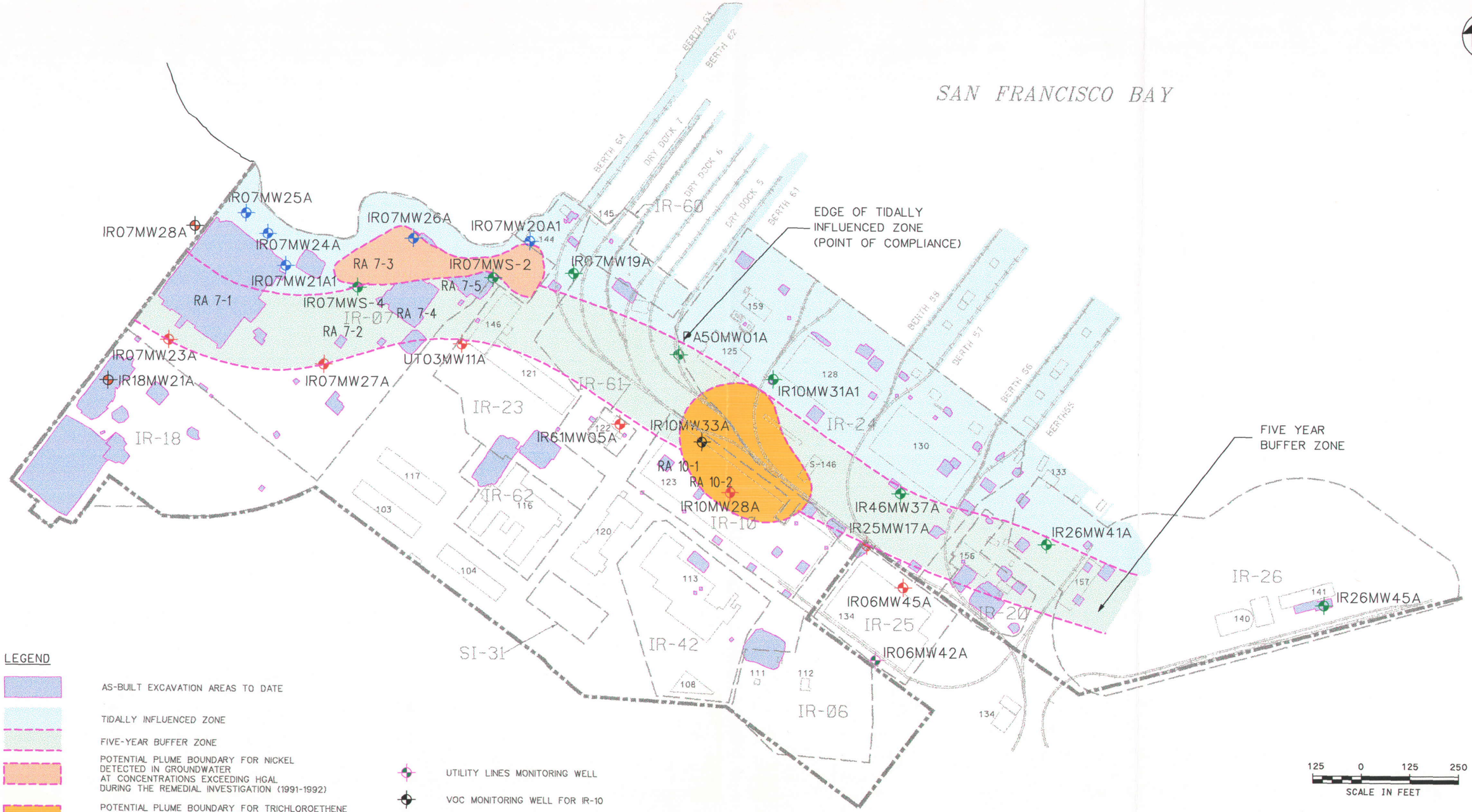
NA Not applicable
ND Not detected. Concentration reported is the analytical detection limit.
RI Remedial investigation

FIGURES



DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND
SOUTHWEST DIVISION	
SAN DIEGO, CALIFORNIA	
HUNTERS POINT SHIPYARD	SAN FRANCISCO, CALIFORNIA

FIGURE 1
FACILITY LOCATION MAP
HUNTERS POINT SHIPYARD



LEGEND

- AS-BUILT EXCAVATION AREAS TO DATE
- TIDALLY INFLUENCED ZONE
- FIVE-YEAR BUFFER ZONE
- POTENTIAL PLUME BOUNDARY FOR NICKEL DETECTED IN GROUNDWATER AT CONCENTRATIONS EXCEEDING HGAL DURING THE REMEDIAL INVESTIGATION (1991-1992)
- POTENTIAL PLUME BOUNDARY FOR TRICHLOROETHENE DETECTED IN GROUNDWATER AT IR-10 DURING THE REMEDIAL INVESTIGATION (1991-1992)
- 104 EXISTING BUILDING
- PARCEL BOUNDARY
- IR SITE BOUNDARY
- RAILROAD TRACK
- UTILITY LINES MONITORING WELL
- VOC MONITORING WELL FOR IR-10
- SENTINEL WELL ALONG INLAND BUFFER ZONE
- REMEDIAL ACTION MONITORING WELL
- POINT OF COMPLIANCE MONITORING WELL
- ON/OFF SITE MIGRATION MONITORING WELL AT IR-07 AND IR-18

125 0 125 250
SCALE IN FEET

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
SOUTHWEST DIVISION
SAN DIEGO, CALIFORNIA

HUNTERS POINT SHIPYARD — SAN FRANCISCO, CALIFORNIA

FIGURE 2
LOCATION OF REMEDIAL ACTION MONITORING PLAN WELLS
PARCEL B

21 JUN 2000 j:\hpa\dgn\parc_b\cto270\fig2_2qtr.dgn

SAN FRANCISCO BAY

IR07MW25A 1.45
IR07MW28A 1.55
IR07MW24A 1.33
IR07MW26A 1.23
IR07MW21A1 1.23
IR07MWS-4 1.34
IR07MWS-2 1.44
IR07MW20A1 1.09
IR07MW19A 0.60
IR07MW23A 1.48
IR07MW27A 2.60
IR18MW21A 1.93
UT03MW11A 2.24
PA50MW01A 0.87
IR10MW31A1 1.05
IR61MW05A 2.26
IR10MW33A 2.16
IR10MW28A 2.53
IR46MW37A 1.83
IR25MW17A 1.75
IR26MW41A 3.03
IR06MW45A 3.42
IR26MW45A 1.08
IR06MW42A 0.86

IR-07 IR-60 IR-61 IR-23 IR-24 IR-18 IR-62 IR-10 IR-26 IR-25 IR-20 IR-42 SI-31 IR-06

BERTH 64 BERTH 62 DRY DOCK 1 DRY DOCK 4 DRY DOCK 5 BERTH 61 BERTH 59 BERTH 57 BERTH 56 BERTHS

LEGEND

IR07MW26A
1.23 MONITORING WELL LOCATION
GROUNDWATER LEVEL ELEVATION (FEET ABOVE MEAN SEA LEVEL)

TIDALLY INFLUENCED ZONE
FIVE-YEAR BUFFER ZONE
104 EXISTING BUILDING
PARCEL BOUNDARY
IR SITE BOUNDARY
RAILROAD TRACK
2 GROUNDWATER LEVEL CONTOUR (FEET ABOVE MSL)
INTERMEDIATE WATER LEVEL CONTOUR AT ½ FOOT INTERVALS

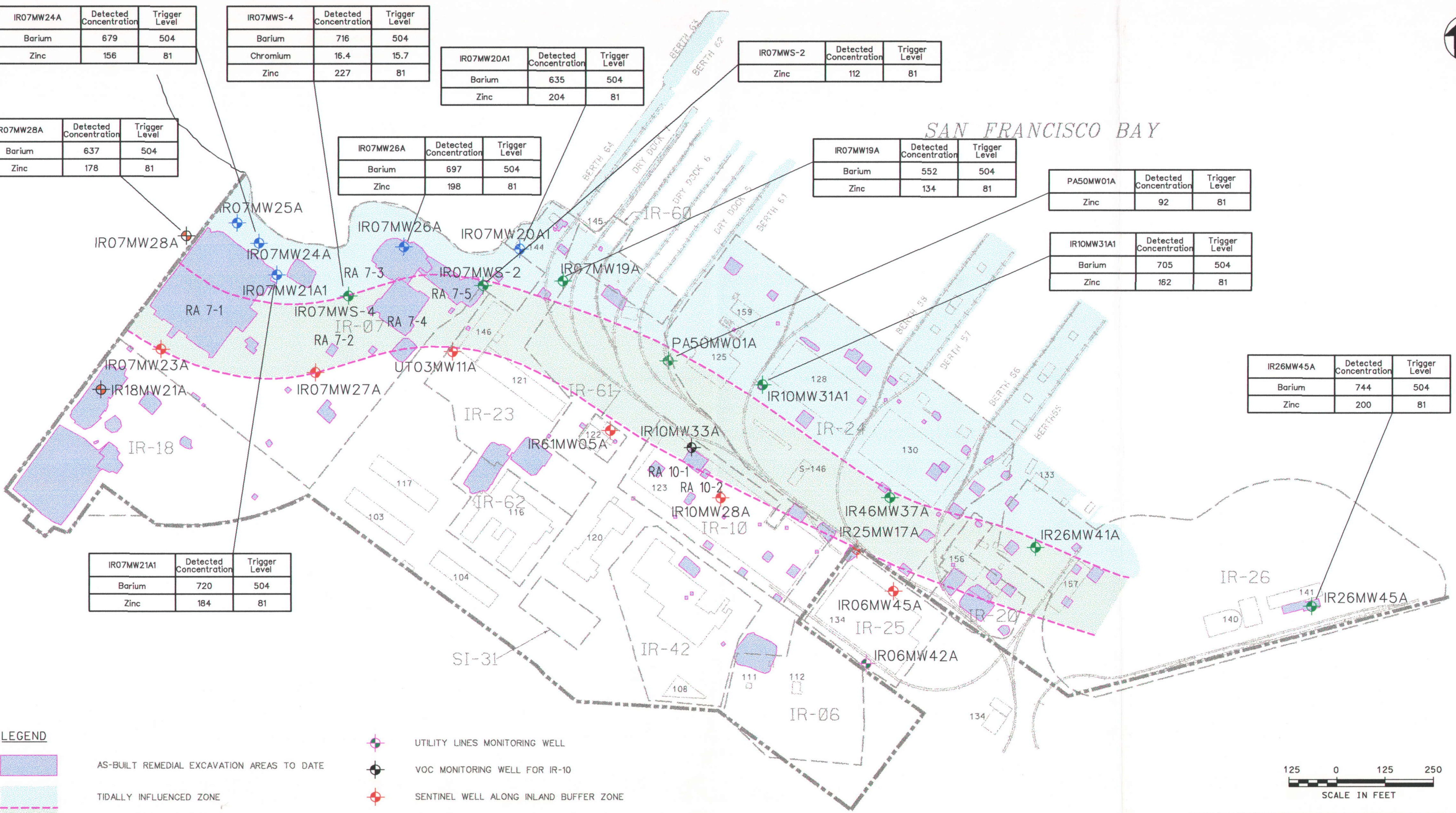
125 0 125 250
SCALE IN FEET

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
SOUTHWEST DIVISION
SAN DIEGO, CALIFORNIA

HUNTERS POINT SHIPYARD SAN FRANCISCO, CALIFORNIA

FIGURE 3
JANUARY 10, 2000
GROUNDWATER LEVEL CONTOUR MAP
PARCEL B

21 JUN 2000 j:\hps\dgn\parc_b\cto270\fig3_gwcntrs_2qtr.dgn



IR07MW24A	Detected Concentration	Trigger Level
Barium	679	504
Zinc	156	81

IR07MWS-4	Detected Concentration	Trigger Level
Barium	716	504
Chromium	16.4	15.7
Zinc	227	81

IR07MW20A1	Detected Concentration	Trigger Level
Barium	635	504
Zinc	204	81

IR07MWS-2	Detected Concentration	Trigger Level
Zinc	112	81

IR07MW28A	Detected Concentration	Trigger Level
Barium	637	504
Zinc	178	81

IR07MW26A	Detected Concentration	Trigger Level
Barium	697	504
Zinc	198	81

IR07MW19A	Detected Concentration	Trigger Level
Barium	552	504
Zinc	134	81

PA50MW01A	Detected Concentration	Trigger Level
Zinc	92	81

IR10MW31A1	Detected Concentration	Trigger Level
Barium	705	504
Zinc	162	81

IR26MW45A	Detected Concentration	Trigger Level
Barium	744	504
Zinc	200	81

IR07MW21A1	Detected Concentration	Trigger Level
Barium	720	504
Zinc	184	81

LEGEND

AS-BUILT REMEDIAL EXCAVATION AREAS TO DATE

TIDALLY INFLUENCED ZONE

FIVE-YEAR BUFFER ZONE

104 EXISTING BUILDING

PARCEL BOUNDARY

IR SITE BOUNDARY

RAILROAD TRACK

UTILITY LINES MONITORING WELL

VOC MONITORING WELL FOR IR-10

SENTINEL WELL ALONG INLAND BUFFER ZONE

REMEDIAL ACTION MONITORING WELL

POINT OF COMPLIANCE MONITORING WELL

ON/OFF SITE MIGRATION MONITORING WELL AT IR-07 AND IR-18

NOTES

ALL TRIGGER LEVELS AND CONCENTRATIONS EXPRESSED AS μg/L

125 0 125 250

SCALE IN FEET

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

SOUTHWEST DIVISION

SAN DIEGO, CALIFORNIA

HUNTERS POINT SHIPYARD SAN FRANCISCO, CALIFORNIA

FIGURE 4

SECOND QUARTER

REMEDIAL ACTION MONITORING PLAN WELLS EXCEEDING TRIGGER LEVELS - PARCEL B

21 JUN 2000 j:\hps\dgn\parc_b\cto270\fig4_2qtr.dgn

APPENDIX A

SUMMARY OF ANALYTICAL RESULTS FOR JANUARY 2000 SAMPLING EVENT WITH TRIGGER LEVELS

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-06	IR06MW42A	UTILITY LINE MONITORING WELL						
IR-06	IR06MW42A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,2,4-TRICHLOROBENZENE	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	1,2-DICHLOROBENZENE	7 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	1,2-DICHLOROETHANE	2 --	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,2-DICHLOROETHENE (TOTAL)	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	1,3-DICHLOROBENZENE	7 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	1,4-DICHLOROBENZENE	7 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,2'-OXYBIS(1-CHLOROPROPANE)	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,4,5-TRICHLOROPHENOL	36 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,4,6-TRICHLOROPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,4-DICHLOROPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,4-DIMETHYLPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,4-DINITROPHENOL	36 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,4-DINITROTOLUENE	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2,6-DINITROTOLUENE	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2-BUTANONE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	2-CHLORONAPHTHALENE	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2-CHLOROPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2-HEXANONE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	2-METHYLNAPHTHALENE	6 --	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2-METHYLPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2-NITROANILINE	36 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	2-NITROPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	3,3'-DICHLOROBENZIDINE	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	3-NITROANILINE	36 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4,4'-DDD	0.02 ND	--	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	4,4'-DDE	0.02 ND	--	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	4,4'-DDT	0.02 ND	--	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	4,6-DINITRO-2-METHYLPHENOL	36 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4-BROMOPHENYL-PHENYLETHER	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4-CHLORO-3-METHYLPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4-CHLOROANILINE	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4-CHLOROPHENYL-PHENYLETHER	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	4-METHYLPHENOL	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4-NITROANILINE	36 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	4-NITROPHENOL	36 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	ACENAPHTHENE	64 --	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	ACENAPHTHYLENE	14 ND	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	ACETONE	10 ND	--	ug/L	VOA	0002P003	
IR-06	IR06MW42A	ALDRIN	0.01 ND	--	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ALPHA-BHC	0.01 ND	--	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ALPHA-CHLORDANE	0.01 ND	--	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	ANTHRACENE	7 --	--	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	ANTIMONY	4.9 --	15,000	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	AROCLOR-1016	0.1 ND	5,000	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	AROCLOR-1221	0.2 ND	5,000	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	AROCLOR-1232	0.1 ND	5,000	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	AROCLOR-1242	0.1 ND	5,000	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	AROCLOR-1248	0.1 ND	5,000	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	AROCLOR-1254	0.1 ND	5,000	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	AROCLOR-1260	0.1 ND	5,000	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ARSENIC	5.3 ND	4,000	ug/L	DMETAL	0002P003A	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-06	IR06MW42A	BARIUM	691 –	100,000	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	BENZENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	BENZO(A)ANTHRACENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BENZO(A)PYRENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BENZO(B)FLUORANTHENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BENZO(G,H,I)PERYLENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BENZO(K)FLUORANTHENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BERYLLIUM	0.25 ND	750	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	BETA-BHC	0.01 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	BIS(2-CHLOROETHOXY)METHANE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BIS(2-CHLOROETHYL)ETHER	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BIS(2-ETHYLHEXYL)PHTHALATE	6 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	BROMODICHLOROMETHANE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	BROMOFORM	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	BROMOMETHANE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	BUTYLBENZYLPHTHALATE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	CADMIUM	0.2 ND	500	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	CALCIUM	65,900 –	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	CARBAZOLE	5 –	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	CARBON DISULFIDE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	CARBON TETRACHLORIDE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	CHLOROBENZENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	CHLOROETHANE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	CHLOROFORM	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	CHLOROMETHANE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	CHROMIUM	1 ND	5,000	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	CHROMIUM VI	10 ND	5,000	ug/L	CHROM	0002P003A	
IR-06	IR06MW42A	CHRYSENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	CIS-1,3-DICHLOROPROPENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	COBALT	1.3 ND	80,000	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	COPPER	1.6 ND	4,000	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	DELTA-BHC	0.01 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	DIBENZ(A,H)ANTHRACENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	DIBENZOFURAN	12 –	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	DIBROMOCHLOROMETHANE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	DIELDRIN	0.02 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	DIESEL RANGE ORGANICS	1,000 –	1,250	ug/L	TPHEXT	0002P003A	
IR-06	IR06MW42A	DIETHYLPHTHALATE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	DIMETHYLPHTHALATE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	DI-N-BUTYLPHTHALATE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	DI-N-OCTYLPHTHALATE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	ENDOSULFAN I	0.01 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ENDOSULFAN II	0.02 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ENDOSULFAN SULFATE	0.02 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ENDRIN	0.02 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ENDRIN ALDEHYDE	0.02 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ENDRIN KETONE	0.02 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	ETHYLBENZENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	FLUORANTHENE	15 –	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	FLUORENE	12 –	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	GAMMA-BHC (LINDANE)	0.01 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	GAMMA-CHLORDANE	0.01 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	GASOLINE RANGE ORGANICS	300 –	1,250	ug/L	TPHPRG	0002P003A	
IR-06	IR06MW42A	HEPTACHLOR	0.002 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	HEPTACHLOR EPOXIDE	0.002 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	HEXACHLOROBENZENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	HEXACHLOROBUTADIENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	HEXACHLOROCYCLOPENTADIENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	HEXACHLOROETHANE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	INDENO(1,2,3-CD)PYRENE	14 ND	–	ug/L	SVOA	0002P003A	

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JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-06	IR06MW42A	IRON	2,790 –	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	ISOPHORONE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	LEAD	1.3 ND	1,500	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	MAGNESIUM	85,900 –	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	MANGANESE	1,020 –	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	MERCURY	0.11 ND	50	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	METHOXYCHLOR	0.1 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	METHYLENE CHLORIDE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	MOLYBDENUM	8 –	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	MOTOR OIL RANGE ORGANICS	400 –	–	ug/L	TPHEXT	0002P003A	
IR-06	IR06MW42A	NAPHTHALENE	97 –	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	NICKEL	1.7 ND	2,000	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	NITROBENZENE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	N-NITROSO-DI-N-PROPYLAMINE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	N-NITROSODIPHENYLAMINE	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	PENTACHLOROPHENOL	36 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	PHENANTHRENE	2 –	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	PHENOL	14 ND	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	POTASSIUM	16,600 –	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	PYRENE	8 –	–	ug/L	SVOA	0002P003A	
IR-06	IR06MW42A	SELENIUM	2.5 ND	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	SILVER	1 ND	600	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	SODIUM	163,000 –	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	STYRENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	TETRACHLOROETHENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	THALLIUM	4.7 ND	7,000	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	TOLUENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	TOXAPHENE	0.6 ND	–	ug/L	PEST	0002P003A	
IR-06	IR06MW42A	TRANS-1,3-DICHLOROPROPENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	TRICHLOROETHENE	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	VANADIUM	1.8 ND	–	ug/L	DMETAL	0002P003A	
IR-06	IR06MW42A	VINYL CHLORIDE	10 ND	200	ug/L	VOA	0002P003	
IR-06	IR06MW42A	XYLENE (TOTAL)	10 ND	–	ug/L	VOA	0002P003	
IR-06	IR06MW42A	ZINC	143 –	7,000	ug/L	DMETAL	0002P003A	
IR-06	**IR06MW45A**	**SENTINEL MONITORING WELL**						
IR-06	IR06MW45A	1,1,1-TRICHLOROETHANE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	1,1,2,2-TETRACHLOROETHANE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	1,1,2-TRICHLOROETHANE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	1,1-DICHLOROETHANE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	1,1-DICHLOROETHENE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	1,2-DICHLOROETHANE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	1,2-DICHLOROETHENE (TOTAL)	10 ND	224,000	ug/L	VOA	0002F004	
IR-06	IR06MW45A	1,2-DICHLOROPROPANE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	2-BUTANONE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	2-HEXANONE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	4-METHYL-2-PENTANONE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	ACETONE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	ALUMINUM	781 ND	–	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	ALUMINUM	30.2 ND	–	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	ANTIMONY	2.2 ND	5,000	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	ANTIMONY	6.2 –	5,000	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	ARSENIC	5.8 ND	360	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	ARSENIC	2.5 ND	360	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	BARIUM	49.6 –	5,040	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	BARIUM	486 –	5,040	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	BENZENE	10 ND	–	ug/L	VOA	0002F004	
IR-06	IR06MW45A	BERYLLIUM	0.1 ND	14	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	BERYLLIUM	0.11 ND	14	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	BROMODICHLOROMETHANE	10 ND	–	ug/L	VOA	0002F004	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-06	IR06MW45A	BROMOFORM	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	CADMIUM	0.2 ND	93	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	CADMIUM	0.99 ND	93	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	CALCIUM	105,000 --	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	CALCIUM	131,000 --	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	CHROMIUM	6.5 ND	157	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	CHROMIUM	4.5 ND	157	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F004	
IR-06	IR06MW45A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	COBALT	1.3 ND	208	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	COBALT	3.8 ND	208	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	COPPER	32.8 --	280	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	COPPER	19.1 --	280	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	DIESEL RANGE ORGANICS	100 --	1,250	ug/L	TPHEXT	0002F004	
IR-06	IR06MW45A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F004	
IR-06	IR06MW45A	IRON	1,550 --	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	IRON	381 --	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	LEAD	17 --	144	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	LEAD	1.3 ND	144	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	MAGNESIUM	336,000 --	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	MAGNESIUM	436,000 --	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	MANGANESE	351 --	81,400	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	MANGANESE	285 --	81,400	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	MERCURY	0.13 ND	6	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	MERCURY	0.15 ND	6	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	MOLYBDENUM	4.7 ND	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	MOLYBDENUM	0.9 ND	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	MOTOR OIL RANGE ORGANICS	500 --	--	ug/L	TPHEXT	0002F004	
IR-06	IR06MW45A	NICKEL	10.9 --	965	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	NICKEL	5.7 --	965	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	POTASSIUM	84,900 --	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	POTASSIUM	108,000 --	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	SELENIUM	2.5 ND	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	SILVER	1 ND	74.3	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	SILVER	3.4 --	74.3	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	SODIUM	2,450,000 --	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	SODIUM	2,980,000 --	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	STYRENE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	THALLIUM	3.2 ND	130	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	THALLIUM	6.3 ND	130	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	TOLUENE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F004	
IR-06	IR06MW45A	TRICHLOROETHENE	10 ND	2,000	ug/L	VOA	0002F004	
IR-06	IR06MW45A	VANADIUM	5 --	--	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	VANADIUM	6.8 --	--	ug/L	DMETAL	0002F004F	
IR-06	IR06MW45A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F004	
IR-06	IR06MW45A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F004	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-06	IR06MW45A	ZINC	81.8 --	810	ug/L	TMETAL	0002F004	
IR-06	IR06MW45A	ZINC	146 --	810	ug/L	DMETAL	0002F004F	
IR-07	**IR07MW19A**	**POC MONITORING WELL**						
IR-07	IR07MW19A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002F002	
IR-07	IR07MW19A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	ACETONE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	ALUMINUM	15.5 ND	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	ANTIMONY	2.2 ND	500	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	ANTIMONY	5 --	500	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	ARSENIC	2.7 ND	36	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	BARIUM	116 --	504	ug/L	TMETAL	0002F002	
IR-07	**IR07MW19A**	**BARIUM**	**552 --**	**504**	**ug/L**	**DMETAL**	**0002F002F**	
IR-07	IR07MW19A	BENZENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	BERYLLIUM	0.18 ND	1.4	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	BERYLLIUM	0.21 ND	1.4	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	BROMOFORM	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	CADMIUM	1.3 ND	9.3	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	CADMIUM	1.6 ND	9.3	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	CALCIUM	377,000 --	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	CALCIUM	380,000 --	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	CHROMIUM	5.9 ND	15.7	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	CHROMIUM	5.6 ND	15.7	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F002	
IR-07	IR07MW19A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	COBALT	1.3 ND	20.8	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	COBALT	1.6 ND	20.8	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	COPPER	1.6 ND	28	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	COPPER	8.4 --	28	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F002	
IR-07	IR07MW19A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F002	
IR-07	IR07MW19A	IRON	1,270 --	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	IRON	1,280 --	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	LEAD	1.3 ND	14.4	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	MAGNESIUM	1,030,000 --	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	MAGNESIUM	1,060,000 --	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	MANGANESE	663 --	8,140	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	MANGANESE	660 --	8,140	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	MERCURY	0.1 ND	0.6	ug/L	TMETAL	0002F002	

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JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW19A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	MOLYBDENUM	7.5 --	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	MOLYBDENUM	5.3 ND	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002F002	
IR-07	IR07MW19A	NICKEL	26.1 --	96.5	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	NICKEL	27 --	96.5	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	POTASSIUM	356,000 --	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	POTASSIUM	367,000 --	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	SELENIUM	2.5 ND	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	SILVER	1 ND	7.43	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	SILVER	3.5 --	7.43	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	SODIUM	7,000,000 --	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	SODIUM	8,090,000 --	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	STYRENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	THALLIUM	12.4 ND	13	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	THALLIUM	12.4 ND	13	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	TOLUENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002F002	
IR-07	IR07MW19A	VANADIUM	2.5 --	--	ug/L	TMETAL	0002F002	
IR-07	IR07MW19A	VANADIUM	3.8 --	--	ug/L	DMETAL	0002F002F	
IR-07	IR07MW19A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F002	
IR-07	IR07MW19A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F002	
IR-07	IR07MW19A	ZINC	1.9 ND	81	ug/L	TMETAL	0002F002	
IR-07	**IR07MW19A**	**ZINC**	**134 --**	**81**	**ug/L**	**DMETAL**	**0002F002F**	
IR-07	**IR07MW20A1**	**POST REMEDIAL ACTION MONITORING WELL**						
IR-07	IR07MW20A1	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	2-BUTANONE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	2-HEXANONE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	ACETONE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	ANTIMONY	7.2 --	500	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	ARSENIC	3.1 ND	36	ug/L	DMETAL	0002F014	
IR-07	**IR07MW20A1**	**BARIUM**	**635 --**	**504**	**ug/L**	**DMETAL**	**0002F014**	
IR-07	IR07MW20A1	BENZENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	BERYLLIUM	0.21 ND	1.4	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	BROMOFORM	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	CADMIUM	1.3 --	9.3	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	CALCIUM	387,000 --	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	CHLOROFORM	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	CHROMIUM	6.5 ND	15.7	ug/L	DMETAL	0002F014	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW20A1	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F014	
IR-07	IR07MW20A1	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	COBALT	1.3 ND	20.8	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	COPPER	6.1 ND	28	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F014	
IR-07	IR07MW20A1	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F014	
IR-07	IR07MW20A1	IRON	20.3 ND	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	MAGNESIUM	1,080,000 --	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	MANGANESE	727 --	8,140	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	MOLYBDENUM	8.5 ND	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002F014	
IR-07	IR07MW20A1	NICKEL	42.5 --	96.5	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	POTASSIUM	384,000 --	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	SILVER	1.4 ND	7.43	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	SODIUM	8,610,000 --	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	STYRENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	THALLIUM	11.5 --	13	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	TOLUENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002F014	
IR-07	IR07MW20A1	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F014	
IR-07	IR07MW20A1	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F014	
IR-07	**IR07MW20A1**	**ZINC**	**204 --**	**81**	**ug/L**	**DMETAL**	**0002F014**	
IR-07	**IR07MW21A1**	**POST REMEDIAL ACTION MONITORING WELL**						
IR-07	IR07MW21A1	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	2-BUTANONE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	2-HEXANONE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	ACETONE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	ANTIMONY	8.7 --	500	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	ARSENIC	3.7 ND	36	ug/L	DMETAL	0002F016	
IR-07	**IR07MW21A1**	**BARIUM**	**720 --**	**504**	**ug/L**	**DMETAL**	**0002F016**	
IR-07	IR07MW21A1	BENZENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	BERYLLIUM	0.1 ND	1.4	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	BROMOFORM	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	CALCIUM	99,400 --	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F016	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW21A1	CHLOROFORM	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F016	
IR-07	IR07MW21A1	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	COBALT	2 --	20.8	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	COPPER	1.9 ND	28	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F016	
IR-07	IR07MW21A1	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F016	
IR-07	IR07MW21A1	IRON	148 ND	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	MAGNESIUM	141,000 --	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	MANGANESE	558 --	8,140	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	MOLYBDENUM	2 ND	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002F016	
IR-07	IR07MW21A1	NICKEL	22.4 --	96.5	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	POTASSIUM	15,400 --	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	SILVER	1.3 ND	7.43	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	SODIUM	180,000 --	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	STYRENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	THALLIUM	3.2 ND	13	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	TOLUENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002F016	
IR-07	IR07MW21A1	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F016	
IR-07	IR07MW21A1	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F016	
IR-07	**IR07MW21A1**	**ZINC**	**184 --**	**81**	**ug/L**	**DMETAL**	**0002F016**	
IR-07	**IR07MW23A**	**SENTINEL MONITORING WELL**						
IR-07	IR07MW23A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	1,2-DICHLOROETHENE (TOTAL)	10 ND	224,000	ug/L	VOA	0002F022	
IR-07	IR07MW23A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	ACETONE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	ANTIMONY	3.4 --	5,000	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	ARSENIC	2.8 ND	360	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	BARIUM	693 --	5,040	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	BENZENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	BERYLLIUM	0.54 ND	14	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	BROMOFORM	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	CADMIUM	0.2 ND	93	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	CALCIUM	86,900 --	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F022	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW23A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	CHROMIUM	1 ND	157	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F022	
IR-07	IR07MW23A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	COBALT	6.6 --	208	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	COPPER	1.9 ND	280	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F022	
IR-07	IR07MW23A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F022	
IR-07	IR07MW23A	IRON	403 --	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	LEAD	1.3 ND	144	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	MAGNESIUM	113,000 --	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	MANGANESE	2,020 --	81,400	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	MERCURY	0.1 ND	6	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	MOLYBDENUM	3.2 ND	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002F022	
IR-07	IR07MW23A	NICKEL	33.9 --	965	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	POTASSIUM	11,000 --	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	SILVER	1.3 ND	74.3	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	SODIUM	109,000 --	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	STYRENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	THALLIUM	3.2 ND	130	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	TOLUENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	TRICHLOROETHENE	10 ND	2,000	ug/L	VOA	0002F022	
IR-07	IR07MW23A	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002F022	
IR-07	IR07MW23A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F022	
IR-07	IR07MW23A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F022	
IR-07	IR07MW23A	ZINC	203 --	810	ug/L	DMETAL	0002F022	
IR-07	**IR07MW24A**	**POST REMEDIAL ACTION MONITORING WELL**						
IR-07	IR07MW24A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002P011	
IR-07	IR07MW24A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	2-BUTANONE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	2-HEXANONE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	ACETONE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	ANTIMONY	6.1 --	500	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	ARSENIC	4.4 ND	36	ug/L	DMETAL	0002P011	
IR-07	**IR07MW24A**	**BARIUM**	**679 --**	**504**	**ug/L**	**DMETAL**	**0002P011**	
IR-07	IR07MW24A	BENZENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	BERYLLIUM	0.53 ND	1.4	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	BROMOFORM	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002P011	

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JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW24A	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	CALCIUM	117,000 --	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	CHLOROFORM	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002P011	
IR-07	IR07MW24A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	COBALT	5.8 --	20.8	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	COPPER	1.9 ND	28	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002P011	
IR-07	IR07MW24A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P011	
IR-07	IR07MW24A	IRON	71.3 --	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	MAGNESIUM	102,000 --	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	MANGANESE	1,880 --	8,140	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	MOLYBDENUM	2.5 ND	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	MOTOR OIL RANGE ORGANICS	200 ND	--	ug/L	TPHEXT	0002P011	
IR-07	IR07MW24A	NICKEL	35.3 --	96.5	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	POTASSIUM	16,800 --	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	SILVER	1.3 ND	7.43	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	SODIUM	169,000 --	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	STYRENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	THALLIUM	3.2 ND	13	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	TOLUENE	0.9 --	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P011	
IR-07	IR07MW24A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002P011	
IR-07	IR07MW24A	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002P011	
IR-07	IR07MW24A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002P011	
IR-07	IR07MW24A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002P011	
IR-07	**IR07MW24A**	**ZINC**	**156 --**	**81**	**ug/L**	**DMETAL**	**0002P011**	
IR-07	**IR07MW25A**	**POST REMEDIAL ACTION MONITORING WELL**						
IR-07	IR07MW25A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002P012	
IR-07	IR07MW25A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	2-BUTANONE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	2-HEXANONE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	ACETONE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	ANTIMONY	2.9 --	500	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	BARIUM	264 --	504	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	BENZENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	BERYLLIUM	0.17 ND	1.4	ug/L	DMETAL	0002P012	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW25A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	BROMOFORM	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	CALCIUM	173,000 --	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	CHLOROFORM	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002P012	
IR-07	IR07MW25A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	COBALT	1.3 ND	20.8	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	COPPER	4.5 ND	28	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002P012	
IR-07	IR07MW25A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P012	
IR-07	IR07MW25A	IRON	23.6 --	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	MAGNESIUM	63,400 --	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	MANGANESE	636 --	8,140	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	MOLYBDENUM	3.2 ND	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	MOTOR OIL RANGE ORGANICS	400 --	--	ug/L	TPHEXT	0002P012	
IR-07	IR07MW25A	NICKEL	3.5 --	96.5	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	POTASSIUM	14,500 --	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	SILVER	1.3 ND	7.43	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	SODIUM	94,000 --	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	STYRENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	THALLIUM	3.2 ND	13	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	TOLUENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002P012	
IR-07	IR07MW25A	VANADIUM	2 --	--	ug/L	DMETAL	0002P012	
IR-07	IR07MW25A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002P012	
IR-07	IR07MW25A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002P012	
IR-07	IR07MW25A	ZINC	36.4 --	81	ug/L	DMETAL	0002P012	
IR-07	**IR07MW26A**	**POST REMEDIAL ACTION MONITORING WELL**						
IR-07	IR07MW26A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002P014	
IR-07	IR07MW26A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	2-BUTANONE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	2-HEXANONE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	ACETONE	10 ND	--	ug/L	VOA	0002P014	
IR-07	IR07MW26A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	ANTIMONY	8.3 --	500	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002P014	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	**IR07MW26A**	**BARIUM**	**697 –**	**504**	**ug/L**	**DMETAL**	**0002P014**	
IR-07	IR07MW26A	BENZENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	BERYLLIUM	0.31 ND	1.4	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	BROMODICHLOROMETHANE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	BROMOFORM	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	BROMOMETHANE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	CADMIUM	0.58 ND	9.3	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	CALCIUM	416,000 –	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	CARBON DISULFIDE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	CARBON TETRACHLORIDE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	CHLOROBENZENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	CHLOROETHANE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	CHLOROFORM	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	CHLOROMETHANE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	CHROMIUM	8.4 ND	15.7	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	CHROMIUM VI	10 ND	–	ug/L	CHROM	0002P014	
IR-07	IR07MW26A	CIS-1,3-DICHLOROPROPENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	COBALT	3 –	20.8	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	COPPER	6 ND	28	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	DIBROMOCHLOROMETHANE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002P014	
IR-07	IR07MW26A	ETHYLBENZENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P014	
IR-07	IR07MW26A	IRON	20.3 ND	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	MAGNESIUM	1,220,000 –	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	MANGANESE	697 –	8,140	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	MERCURY	0.12 ND	0.6	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	METHYLENE CHLORIDE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	MOLYBDENUM	5.4 ND	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	MOTOR OIL RANGE ORGANICS	100 ND	–	ug/L	TPHEXT	0002P014	
IR-07	IR07MW26A	NICKEL	36.9 –	96.5	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	POTASSIUM	346,000 –	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	SELENIUM	2.2 ND	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	SILVER	6.2 ND	7.43	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	SODIUM	7,820,000 –	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	STYRENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	TETRACHLOROETHENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	THALLIUM	5.3 –	13	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	TOLUENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	TRANS-1,3-DICHLOROPROPENE	10 ND	–	ug/L	VOA	0002P014	
IR-07	IR07MW26A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002P014	
IR-07	IR07MW26A	VANADIUM	6.1 –	–	ug/L	DMETAL	0002P014	
IR-07	IR07MW26A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002P014	
IR-07	IR07MW26A	XYLENE (TOTAL)	10 ND	–	ug/L	VOA	0002P014	
IR-07	**IR07MW26A**	**ZINC**	**198 –**	**81**	**ug/L**	**DMETAL**	**0002P014**	
IR-07	**IR07MW27A**	**SENTINEL MONITORING WELL**						
IR-07	IR07MW27A	1,1,1-TRICHLOROETHANE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	1,1,2,2-TETRACHLOROETHANE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	1,1,2-TRICHLOROETHANE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	1,1-DICHLOROETHANE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	1,1-DICHLOROETHENE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	1,2-DICHLOROETHANE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	1,2-DICHLOROETHENE (TOTAL)	10 ND	224,000	ug/L	VOA	0002F015	
IR-07	IR07MW27A	1,2-DICHLOROPROPANE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	2-BUTANONE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	2-HEXANONE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	4-METHYL-2-PENTANONE	10 ND	–	ug/L	VOA	0002F015	
IR-07	IR07MW27A	ACETONE	10 ND	–	ug/L	VOA	0002F015	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW27A	ALUMINUM	15.6 ND	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	ANTIMONY	3.5 --	5,000	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	ARSENIC	51.1 --	360	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	BARIUM	634 --	5,040	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	BENZENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	BERYLLIUM	0.1 ND	14	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	BROMOFORM	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	CADMIUM	0.2 ND	93	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	CALCIUM	17,900 --	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	CHROMIUM	1 ND	157	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F015	
IR-07	IR07MW27A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	COBALT	1.3 ND	208	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	COPPER	8.6 ND	280	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F015	
IR-07	IR07MW27A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F015	
IR-07	IR07MW27A	IRON	20.3 ND	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	LEAD	1.3 ND	144	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	MAGNESIUM	34,100 --	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	MANGANESE	147 --	81,400	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	MERCURY	0.1 ND	6	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	MOLYBDENUM	5.1 ND	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002F015	
IR-07	IR07MW27A	NICKEL	3.1 --	965	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	POTASSIUM	9,080 --	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	SILVER	1.3 ND	74.3	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	SODIUM	231,000 --	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	STYRENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	THALLIUM	3.2 ND	130	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	TOLUENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	TRICHLOROETHENE	10 ND	2,000	ug/L	VOA	0002F015	
IR-07	IR07MW27A	VANADIUM	15.2 --	--	ug/L	DMETAL	0002F015	
IR-07	IR07MW27A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F015	
IR-07	IR07MW27A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F015	
IR-07	IR07MW27A	ZINC	116 --	810	ug/L	DMETAL	0002F015	
IR-07	**IR07MW28A**	**ON/OFF-SITE MIGRATION MONITORING WELLS**						
IR-07	IR07MW28A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F019	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW28A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,2,4-TRICHLOROBENZENE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	1,2,4-TRICHLOROBENZENE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	1,2-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	1,2-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002F019	
IR-07	IR07MW28A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	1,3-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	1,3-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	1,4-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	1,4-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,2'-OXYBIS(1-CHLOROPROPANE)	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,2'-OXYBIS(1-CHLOROPROPANE)	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,4,5-TRICHLOROPHENOL	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,4,5-TRICHLOROPHENOL	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,4,6-TRICHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,4,6-TRICHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,4-DICHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,4-DICHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,4-DIMETHYLPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,4-DIMETHYLPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,4-DINITROPHENOL	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,4-DINITROPHENOL	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,4-DINITROTOLUENE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,4-DINITROTOLUENE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2,6-DINITROTOLUENE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2,6-DINITROTOLUENE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	2-CHLORONAPHTHALENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2-CHLORONAPHTHALENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2-CHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2-CHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	2-METHYLNAPHTHALENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2-METHYLNAPHTHALENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2-NITROANILINE	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2-NITROANILINE	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	2-NITROPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	2-NITROPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	3,3'-DICHLOROBENZIDINE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	3,3'-DICHLOROBENZIDINE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	3-NITROANILINE	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	3-NITROANILINE	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4,4'-DDD	0.06 --	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	4,4'-DDD	0.06 --	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	4,4'-DDE	0.02 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	4,4'-DDE	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	4,4'-DDT	0.02 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	4,4'-DDT	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	4,6-DINITRO-2-METHYLPHENOL	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	4,6-DINITRO-2-METHYLPHENOL	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4-BROMOPHENYL-PHENYLETHER	10 ND	--	ug/L	SVOA	0002F019	

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JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW28A	4-BROMOPHENYL-PHENYLETHER	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4-CHLORO-3-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	4-CHLORO-3-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4-CHLOROANILINE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	4-CHLOROANILINE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4-CHLOROPHENYL-PHENYLETHER	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	4-CHLOROPHENYL-PHENYLETHER	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	4-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	4-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4-NITROANILINE	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	4-NITROANILINE	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	4-NITROPHENOL	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	4-NITROPHENOL	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	ACENAPHTHENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	ACENAPHTHENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	ACENAPHTHYLENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	ACENAPHTHYLENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	ACETONE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	ACETONE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	ALDRIN	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ALDRIN	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ALPHA-BHC	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ALPHA-BHC	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ALPHA-CHLORDANE	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ALPHA-CHLORDANE	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	ANTHRACENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	ANTHRACENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	ANTIMONY	8 --	500	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	ANTIMONY	6.2 --	500	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	AROCLOR-1016	0.1 ND	0.19	ug/L	PEST	0002F019	
IR-07	IR07MW28A	AROCLOR-1016	0.1 ND	0.19	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	AROCLOR-1221	0.2 ND	0.19	ug/L	PEST	0002F019	
IR-07	IR07MW28A	AROCLOR-1221	0.2 ND	0.19	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	AROCLOR-1232	0.1 ND	0.19	ug/L	PEST	0002F019	
IR-07	IR07MW28A	AROCLOR-1232	0.1 ND	0.19	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	AROCLOR-1242	0.1 ND	0.19	ug/L	PEST	0002F019	
IR-07	IR07MW28A	AROCLOR-1242	0.1 ND	0.19	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	AROCLOR-1248	0.1 ND	0.19	ug/L	PEST	0002F019	
IR-07	IR07MW28A	AROCLOR-1248	0.1 ND	0.19	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	AROCLOR-1254	0.1 ND	0.19	ug/L	PEST	0002F019	
IR-07	IR07MW28A	AROCLOR-1254	0.1 ND	0.19	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	AROCLOR-1260	0.1 ND	0.19	ug/L	PEST	0002F019	
IR-07	IR07MW28A	AROCLOR-1260	0.1 ND	0.19	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ARSENIC	8.4 ND	36	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	ARSENIC	6.6 ND	36	ug/L	DMETAL	0002F020	0002F019
IR-07	**IR07MW28A**	**BARIUM**	**549 --**	**504**	**ug/L**	**DMETAL**	**0002F019**	
IR-07	**IR07MW28A**	**BARIUM**	**637 --**	**504**	**ug/L**	**DMETAL**	**0002F020**	**0002F019**
IR-07	IR07MW28A	BENZENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	BENZENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	BENZO(A)ANTHRACENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BENZO(A)ANTHRACENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BENZO(A)PYRENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BENZO(A)PYRENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BENZO(B)FLUORANTHENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BENZO(B)FLUORANTHENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BENZO(G,H,I)PERYLENE	10 ND	300	ug/L	SVOA	0002F019	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
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HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW28A	BENZO(G,H,I)PERYLENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BENZO(K)FLUORANTHENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BENZO(K)FLUORANTHENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BERYLLIUM	0.23 ND	1.4	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	BERYLLIUM	0.21 ND	1.4	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	BETA-BHC	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	BETA-BHC	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	BIS(2-CHLOROETHOXY)METHANE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BIS(2-CHLOROETHOXY)METHANE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BIS(2-CHLOROETHYL)ETHER	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BIS(2-CHLOROETHYL)ETHER	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BIS(2-ETHYLHEXYL)PHTHALATE	4 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BIS(2-ETHYLHEXYL)PHTHALATE	4 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	BROMOFORM	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	BROMOFORM	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	BUTYLBENZYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	BUTYLBENZYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	CALCIUM	169,000 --	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	CALCIUM	166,000 --	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	CARBAZOLE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	CARBAZOLE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F019	
IR-07	IR07MW28A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F020	0002F019
IR-07	IR07MW28A	CHRYSENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	CHRYSENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	COBALT	1.3 ND	20.8	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	COBALT	1.3 ND	20.8	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	COPPER	2.2 ND	28	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	COPPER	1.9 ND	28	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	DELTA-BHC	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	DELTA-BHC	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	DIBENZ(A,H)ANTHRACENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	DIBENZ(A,H)ANTHRACENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	DIBENZOFURAN	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	DIBENZOFURAN	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	DIELDRIN	0.02 ND	--	ug/L	PEST	0002F019	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MW28A	DIELDRIN	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F019	
IR-07	IR07MW28A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F020	0002F019
IR-07	IR07MW28A	DIETHYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	DIETHYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	DIMETHYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	DIMETHYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	DI-N-BUTYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	DI-N-BUTYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	DI-N-OCTYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	DI-N-OCTYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	ENDOSULFAN I	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ENDOSULFAN I	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ENDOSULFAN II	0.02 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ENDOSULFAN II	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ENDOSULFAN SULFATE	0.02 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ENDOSULFAN SULFATE	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ENDRIN	0.02 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ENDRIN	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ENDRIN ALDEHYDE	0.02 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ENDRIN ALDEHYDE	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ENDRIN KETONE	0.02 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	ENDRIN KETONE	0.02 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	FLUORANTHENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	FLUORANTHENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	FLUORENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	FLUORENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	GAMMA-BHC (LINDANE)	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	GAMMA-BHC (LINDANE)	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	GAMMA-CHLORDANE	0.01 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	GAMMA-CHLORDANE	0.01 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F019	
IR-07	IR07MW28A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F020	0002F019
IR-07	IR07MW28A	HEPTACHLOR	0.002 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	HEPTACHLOR	0.002 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	HEPTACHLOR EPOXIDE	0.002 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	HEPTACHLOR EPOXIDE	0.002 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	HEXACHLOROBENZENE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	HEXACHLOROBENZENE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	HEXACHLOROBUTADIENE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	HEXACHLOROBUTADIENE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	HEXACHLOROCYCLOPENTADIENE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	HEXACHLOROCYCLOPENTADIENE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	HEXACHLOROETHANE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	HEXACHLOROETHANE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	INDENO(1,2,3-CD)PYRENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	INDENO(1,2,3-CD)PYRENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	IRON	834 --	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	IRON	736 --	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	ISOPHORONE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	ISOPHORONE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	MAGNESIUM	68,400 --	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	MAGNESIUM	69,800 --	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	MANGANESE	833 --	8,140	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	MANGANESE	837 --	8,140	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	MERCURY	0.15 ND	0.6	ug/L	DMETAL	0002F019	

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IR-07	IR07MW28A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	METHOXYCHLOR	0.1 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	METHOXYCHLOR	0.1 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	MOLYBDENUM	3.2 ND	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	MOLYBDENUM	3.4 ND	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	MOTOR OIL RANGE ORGANICS	600 --	--	ug/L	TPHEXT	0002F019	
IR-07	IR07MW28A	MOTOR OIL RANGE ORGANICS	400 --	--	ug/L	TPHEXT	0002F020	0002F019
IR-07	IR07MW28A	NAPHTHALENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	NAPHTHALENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	NICKEL	2.1 --	96.5	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	NICKEL	1.7 ND	96.5	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	NITROBENZENE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	NITROBENZENE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	N-NITROSO-DI-N-PROPYLAMINE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	N-NITROSO-DI-N-PROPYLAMINE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	N-NITROSODIPHENYLAMINE	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	N-NITROSODIPHENYLAMINE	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	PENTACHLOROPHENOL	26 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	PENTACHLOROPHENOL	25 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	PHENANTHRENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	PHENANTHRENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	PHENOL	10 ND	--	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	PHENOL	10 ND	--	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	POTASSIUM	16,100 --	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	POTASSIUM	16,200 --	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	PYRENE	10 ND	300	ug/L	SVOA	0002F019	
IR-07	IR07MW28A	PYRENE	10 ND	300	ug/L	SVOA	0002F020	0002F019
IR-07	IR07MW28A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	SILVER	1.3 ND	7.43	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	SILVER	1.3 ND	7.43	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	SODIUM	140,000 --	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	SODIUM	160,000 --	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	STYRENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	STYRENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	THALLIUM	3.2 ND	13	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	THALLIUM	3.2 ND	13	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	TOLUENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	TOLUENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	TOXAPHENE	0.6 ND	--	ug/L	PEST	0002F019	
IR-07	IR07MW28A	TOXAPHENE	0.6 ND	--	ug/L	PEST	0002F020	0002F019
IR-07	IR07MW28A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002F019	
IR-07	IR07MW28A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	VANADIUM	2.8 --	--	ug/L	DMETAL	0002F019	
IR-07	IR07MW28A	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002F020	0002F019
IR-07	IR07MW28A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F019	
IR-07	IR07MW28A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F020	0002F019
IR-07	IR07MW28A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F019	
IR-07	IR07MW28A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F020	0002F019
IR-07	**IR07MW28A**	**ZINC**	**178 --**	**81**	**ug/L**	**DMETAL**	**0002F019**	
IR-07	**IR07MW28A**	**ZINC**	**138 --**	**81**	**ug/L**	**DMETAL**	**0002F020**	**0002F019**
IR-07	IR07MWS-2	POC MONITORING WELL						

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MWS-2	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	2-BUTANONE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	2-BUTANONE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	2-HEXANONE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	2-HEXANONE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	ACETONE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	ACETONE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	ANTIMONY	11.8 --	500	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	ANTIMONY	10.7 --	500	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	BARIUM	459 --	504	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	BARIUM	456 --	504	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	BENZENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	BENZENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	BERYLLIUM	0.16 ND	1.4	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	BERYLLIUM	0.23 ND	1.4	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	BROMOFORM	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	BROMOFORM	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	BROMOMETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	BROMOMETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	CADMIUM	0.35 ND	9.3	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	CADMIUM	0.71 ND	9.3	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	CALCIUM	440,000 --	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	CALCIUM	432,000 --	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	CHLOROETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	CHLOROETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	CHLOROFORM	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	CHLOROFORM	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002P008	0002P007

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HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MWS-2	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002P007	
IR-07	IR07MWS-2	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002P008	0002P007
IR-07	IR07MWS-2	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	COBALT	3.6 ND	20.8	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	COBALT	4.4 ND	20.8	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	COPPER	10.5 --	28	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	COPPER	7.1 --	28	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002P007	
IR-07	IR07MWS-2	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002P008	0002P007
IR-07	IR07MWS-2	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P007	
IR-07	IR07MWS-2	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P008	0002P007
IR-07	IR07MWS-2	IRON	856 --	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	IRON	641 --	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	MAGNESIUM	695,000 --	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	MAGNESIUM	688,000 --	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	MANGANESE	835 --	8,140	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	MANGANESE	820 --	8,140	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	MERCURY	0.12 ND	0.6	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	MOLYBDENUM	7.9 --	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	MOLYBDENUM	6.4 --	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	MOTOR OIL RANGE ORGANICS	200 --	--	ug/L	TPHEXT	0002P007	
IR-07	IR07MWS-2	MOTOR OIL RANGE ORGANICS	300 --	--	ug/L	TPHEXT	0002P008	0002P007
IR-07	IR07MWS-2	NICKEL	48.9 --	96.5	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	NICKEL	49.6 --	96.5	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	POTASSIUM	225,000 --	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	POTASSIUM	191,000 --	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	SILVER	3.1 --	7.43	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	SILVER	1 ND	7.43	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	SODIUM	4,610,000 --	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	SODIUM	4,910,000 --	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	STYRENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	STYRENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	THALLIUM	12.5 ND	13	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	THALLIUM	7.5 ND	13	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	TOLUENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	TOLUENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002P008	0002P007
IR-07	IR07MWS-2	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002P007	
IR-07	IR07MWS-2	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002P008	0002P007
IR-07	IR07MWS-2	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002P008	0002P007

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MWS-2	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002P007	
IR-07	IR07MWS-2	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002P008	0002P007
IR-07	**IR07MWS-2**	**ZINC**	**110 --**	**81**	**ug/L**	**DMETAL**	**0002P007**	
IR-07	**IR07MWS-2**	**ZINC**	**112 --**	**81**	**ug/L**	**DMETAL**	**0002P008**	**0002P007**
IR-07	**IR07MWS-4**	**POC MONITORING WELL**						
IR-07	IR07MWS-4	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	2-BUTANONE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	2-HEXANONE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	ACETONE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	ANTIMONY	5.4 --	500	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002P009	
IR-07	**IR07MWS-4**	**BARIUM**	**716 --**	**504**	**ug/L**	**DMETAL**	**0002P009**	
IR-07	IR07MWS-4	BENZENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	BERYLLIUM	0.11 ND	1.4	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	BROMOFORM	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	BROMOMETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	CADMIUM	0.88 ND	9.3	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	CALCIUM	160,000 --	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	CHLOROETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	CHLOROFORM	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	**IR07MWS-4**	**CHROMIUM**	**16.4 --**	**15.7**	**ug/L**	**DMETAL**	**0002P009**	
IR-07	IR07MWS-4	CHROMIUM VI	10 --	--	ug/L	CHROM	0002P009	
IR-07	IR07MWS-4	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	COBALT	1.4 ND	20.8	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	COPPER	2 --	28	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002P009	
IR-07	IR07MWS-4	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P009	
IR-07	IR07MWS-4	IRON	375 --	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	MAGNESIUM	489,000 --	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	MANGANESE	352 --	8,140	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	MOLYBDENUM	9.8 --	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	MOTOR OIL RANGE ORGANICS	200 --	--	ug/L	TPHEXT	0002P009	
IR-07	IR07MWS-4	NICKEL	36.2 --	96.5	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	POTASSIUM	187,000 --	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	SILVER	1 ND	7.43	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	SODIUM	3,680,000 --	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	STYRENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	THALLIUM	6.7 ND	13	ug/L	DMETAL	0002P009	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-07	IR07MWS-4	TOLUENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	VANADIUM	4.4 --	--	ug/L	DMETAL	0002P009	
IR-07	IR07MWS-4	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002P009	
IR-07	IR07MWS-4	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002P009	
IR-07	**IR07MWS-4**	**ZINC**	**227 --**	**81**	**ug/L**	**DMETAL**	**0002P009**	
IR-10	**IR10MW28A**	**SENTINEL MONITORING WELL**						
IR-10	IR10MW28A	1,1,1-TRICHLOROETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,1,2,2-TETRACHLOROETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,1,2-TRICHLOROETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,1-DICHLOROETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,1-DICHLOROETHENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,2,4-TRICHLOROBENZENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,2-DIBROMO-3-CHLOROPROPANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,2-DIBROMOETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,2-DICHLOROBENZENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,2-DICHLOROETHANE	1 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,2-DICHLOROPROPANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,3-DICHLOROBENZENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	1,4-DICHLOROBENZENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	2-BUTANONE	10 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	2-HEXANONE	10 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	ACETONE	10 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	ANTIMONY	7.1 --	5,000	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	ARSENIC	2.5 ND	360	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	BARIUM	854 --	5,040	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	BENZENE	1 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	BERYLLIUM	0.1 ND	14	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	BROMOCHLOROMETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	BROMODICHLOROMETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	BROMOFORM	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	BROMOMETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CADMIUM	0.2 ND	93	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	CALCIUM	78,700 --	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	CARBON DISULFIDE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CARBON TETRACHLORIDE	1 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CHLOROBENZENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CHLOROETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CHLOROFORM	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CHLOROMETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CHROMIUM	1 ND	157	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F009A	
IR-10	IR10MW28A	CIS-1,2-DICHLOROETHENE	0.6 --	224,000	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	CIS-1,3-DICHLOROPROPENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	COBALT	1.3 ND	208	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	COPPER	2.2 ND	280	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	DIBROMOCHLOROMETHANE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F009A	
IR-10	IR10MW28A	ETHYLBENZENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F009A	
IR-10	IR10MW28A	IRON	482 --	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	LEAD	1.3 ND	144	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	MAGNESIUM	514,000 --	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	MANGANESE	26.6 --	81,400	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	MERCURY	0.19 ND	6	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	METHYLENE CHLORIDE	4 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	MOLYBDENUM	4.9 ND	--	ug/L	DMETAL	0002F009A	

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JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-10	IR10MW28A	MOTOR OIL RANGE ORGANICS	200 ND	--	ug/L	TPHEXT	0002F009A	
IR-10	IR10MW28A	NICKEL	7.3 --	965	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	POTASSIUM	1,840 --	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	PROPANE, 2-METHOXY-2-METHYL-	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	SILVER	1.3 ND	74.3	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	SODIUM	185,000 --	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	STYRENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	TETRACHLOROETHENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	THALLIUM	3.2 ND	130	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	TOLUENE	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	TRANS-1,2-DICHLOROETHENE	2 ND	224,000	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	TRANS-1,3-DICHLOROPROPENE	1 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	TRICHLOROETHENE	40 --	2,000	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	VANADIUM	4.2 --	--	ug/L	DMETAL	0002F009A	
IR-10	IR10MW28A	VINYL CHLORIDE	1 ND	55	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	XYLENE (TOTAL)	2 ND	--	ug/L	LVOA	0002F009	
IR-10	IR10MW28A	ZINC	208 --	810	ug/L	DMETAL	0002F009A	
IR-10	**IR10MW31A1**	**POC MONITORING WELL**						
IR-10	IR10MW31A1	1,1,1-TRICHLOROETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,1,2,2-TETRACHLOROETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,1,2-TRICHLOROETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,1-DICHLOROETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,1-DICHLOROETHENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,2,4-TRICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,2-DIBROMO-3-CHLOROPROPANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,2-DIBROMOETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,2-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,2-DICHLOROETHANE	0.5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,2-DICHLOROPROPANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,3-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	1,4-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	2-BUTANONE	5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	2-HEXANONE	5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	4-METHYL-2-PENTANONE	5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	ACETONE	5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	ANTIMONY	3.8 --	500	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002F010	
IR-10	**IR10MW31A1**	**BARIUM**	**705 --**	**504**	**ug/L**	**DMETAL**	**0002F010**	
IR-10	IR10MW31A1	BENZENE	0.5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	BERYLLIUM	0.1 ND	1.4	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	BROMOCHLOROMETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	BROMODICHLOROMETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	BROMOFORM	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	BROMOMETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CADMIUM	0.39 ND	9.3	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	CALCIUM	217,000 --	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	CARBON DISULFIDE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CARBON TETRACHLORIDE	0.5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CHLOROBENZENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CHLOROETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CHLOROFORM	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CHLOROMETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CHROMIUM	1.8 ND	15.7	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F010	
IR-10	IR10MW31A1	CIS-1,2-DICHLOROETHENE	1 ND	22,400	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	CIS-1,3-DICHLOROPROPENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	COBALT	1.5 ND	20.8	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	COPPER	6.5 --	28	ug/L	DMETAL	0002F010	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-10	IR10MW31A1	DIBROMOCHLOROMETHANE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F010	
IR-10	IR10MW31A1	ETHYLBENZENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F010	
IR-10	IR10MW31A1	IRON	515 --	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	MAGNESIUM	460,000 --	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	MANGANESE	529 --	8,140	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	METHYLENE CHLORIDE	2 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	MOLYBDENUM	9.8 --	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002F010	
IR-10	IR10MW31A1	NICKEL	14 --	96.5	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	POTASSIUM	78,400 --	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	PROPANE, 2-METHOXY-2-METHYL-	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	SILVER	3.2 --	7.43	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	SODIUM	2,670,000 --	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	STYRENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	TETRACHLOROETHENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	THALLIUM	6.2 ND	13	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	TOLUENE	1 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	TRANS-1,2-DICHLOROETHENE	1 ND	22,400	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	TRANS-1,3-DICHLOROPROPENE	0.5 ND	--	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	TRICHLOROETHENE	1 ND	200	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	VANADIUM	4.6 --	--	ug/L	DMETAL	0002F010	
IR-10	IR10MW31A1	VINYL CHLORIDE	0.5 ND	55	ug/L	LVOA	0002F010	
IR-10	IR10MW31A1	XYLENE (TOTAL)	1 ND	--	ug/L	LVOA	0002F010	
IR-10	**IR10MW31A1**	**ZINC**	**162 --**	**81**	**ug/L**	**DMETAL**	**0002F010**	
IR-10	**IR10MW33A**	**VOC MONITORING WELL**						
IR-10	IR10MW33A	1,1,1-TRICHLOROETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,1,2,2-TETRACHLOROETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,1,2-TRICHLOROETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,1-DICHLOROETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,1-DICHLOROETHENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,2,4-TRICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,2-DIBROMO-3-CHLOROPROPANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,2-DIBROMOETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,2-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,2-DICHLOROETHANE	0.5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,2-DICHLOROPROPANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,3-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	1,4-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	2-BUTANONE	5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	2-HEXANONE	5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	4-METHYL-2-PENTANONE	5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	ACETONE	5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	BENZENE	0.5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	BROMOCHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	BROMODICHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	BROMOFORM	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	BROMOMETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CARBON DISULFIDE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CARBON TETRACHLORIDE	0.5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CHLOROETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CHLOROFORM	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CIS-1,2-DICHLOROETHENE	13 --	224,000	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	CIS-1,3-DICHLOROPROPENE	1 ND	--	ug/L	LVOA	0002P004	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-10	IR10MW33A	DIBROMOCHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	ETHYLBENZENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	METHYLENE CHLORIDE	2 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	PROPANE, 2-METHOXY-2-METHYL-	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	STYRENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	TETRACHLOROETHENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	TOLUENE	1 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	TRANS-1,2-DICHLOROETHENE	0.3 --	224,000	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	TRANS-1,3-DICHLOROPROPENE	0.5 ND	--	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	TRICHLOROETHENE	23 --	2,000	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	VINYL CHLORIDE	0.5 ND	55	ug/L	LVOA	0002P004	
IR-10	IR10MW33A	XYLENE (TOTAL)	1 ND	--	ug/L	LVOA	0002P004	
IR-18	**IR18MW21A**	**ON/OFF-SITE MIGRATION MONITORING WELLS**						
IR-18	IR18MW21A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,2,4-TRICHLOROBENZENE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	1,2-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,2-DICHLOROETHENE (TOTAL)	10 ND	224,000	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	1,3-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	1,4-DICHLOROBENZENE	5 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,2'-OXYBIS(1-CHLOROPROPANE)	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,4,5-TRICHLOROPHENOL	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,4,6-TRICHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,4-DICHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,4-DIMETHYLPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,4-DINITROPHENOL	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,4-DINITROTOLUENE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2,6-DINITROTOLUENE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	2-CHLORONAPHTHALENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2-CHLOROPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	2-METHYLNAPHTHALENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2-NITROANILINE	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	2-NITROPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	3,3'-DICHLOROBENZIDINE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	3-NITROANILINE	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4,4'-DDD	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	4,4'-DDE	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	4,4'-DDT	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	4,6-DINITRO-2-METHYLPHENOL	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4-BROMOPHENYL-PHENYLETHER	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4-CHLORO-3-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4-CHLOROANILINE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4-CHLOROPHENYL-PHENYLETHER	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	4-METHYLPHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4-NITROANILINE	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	4-NITROPHENOL	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	ACENAPHTHENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	ACENAPHTHYLENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	ACETONE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	ALDRIN	0.01 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ALPHA-BHC	0.01 ND	--	ug/L	PEST	0002F021	

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HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-18	IR18MW21A	ALPHA-CHLORDANE	0.01 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	ANTHRACENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	ANTIMONY	4 --	5,000	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	AROCLOR-1016	0.1 ND	1.9	ug/L	PEST	0002F021	
IR-18	IR18MW21A	AROCLOR-1221	0.2 ND	1.9	ug/L	PEST	0002F021	
IR-18	IR18MW21A	AROCLOR-1232	0.1 ND	1.9	ug/L	PEST	0002F021	
IR-18	IR18MW21A	AROCLOR-1242	0.1 ND	1.9	ug/L	PEST	0002F021	
IR-18	IR18MW21A	AROCLOR-1248	0.1 ND	1.9	ug/L	PEST	0002F021	
IR-18	IR18MW21A	AROCLOR-1254	0.1 ND	1.9	ug/L	PEST	0002F021	
IR-18	IR18MW21A	AROCLOR-1260	0.1 ND	1.9	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ARSENIC	14.2 ND	360	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	BARIUM	851 --	5,040	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	BENZENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	BENZO(A)ANTHRACENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BENZO(A)PYRENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BENZO(B)FLUORANTHENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BENZO(G,H,I)PERYLENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BENZO(K)FLUORANTHENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BERYLLIUM	0.23 ND	14	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	BETA-BHC	0.01 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	BIS(2-CHLOROETHOXY)METHANE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BIS(2-CHLOROETHYL)ETHER	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BIS(2-ETHYLHEXYL)PHTHALATE	4 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	BROMOFORM	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	BUTYLBENZYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	CADMIUM	0.2 ND	93	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	CALCIUM	99,000 --	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	CARBAZOLE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	CHROMIUM	1 ND	157	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F021	
IR-18	IR18MW21A	CHRYSENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	COBALT	1.3 ND	208	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	COPPER	2.1 ND	280	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	DELTA-BHC	0.01 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	DIBENZ(A,H)ANTHRACENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	DIBENZOFURAN	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	DIELDRIN	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	DIESEL RANGE ORGANICS	100 --	1,250	ug/L	TPHEXT	0002F021	
IR-18	IR18MW21A	DIETHYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	DIMETHYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	DI-N-BUTYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	DI-N-OCTYLPHTHALATE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	ENDOSULFAN I	0.01 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ENDOSULFAN II	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ENDOSULFAN SULFATE	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ENDRIN	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ENDRIN ALDEHYDE	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ENDRIN KETONE	0.02 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F021	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-18	IR18MW21A	FLUORANTHENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	FLUORENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	GAMMA-BHC (LINDANE)	0.01 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	GAMMA-CHLORDANE	0.01 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F021	
IR-18	IR18MW21A	HEPTACHLOR	0.002 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	HEPTACHLOR EPOXIDE	0.002 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	HEXACHLOROBENZENE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	HEXACHLOROBUTADIENE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	HEXACHLOROCYCLOPENTADIENE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	HEXACHLOROETHANE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	INDENO(1,2,3-CD)PYRENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	IRON	2,220 --	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	ISOPHORONE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	LEAD	1.3 ND	144	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	MAGNESIUM	59,400 --	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	MANGANESE	989 --	81,400	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	MERCURY	0.27 ND	6	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	METHOXYCHLOR	0.1 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	MOLYBDENUM	6.8 ND	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	MOTOR OIL RANGE ORGANICS	500 --	--	ug/L	TPHEXT	0002F021	
IR-18	IR18MW21A	NAPHTHALENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	NICKEL	2.1 --	965	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	NITROBENZENE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	N-NITROSO-DI-N-PROPYLAMINE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	N-NITROSODIPHENYLAMINE	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	PENTACHLOROPHENOL	26 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	PHENANTHRENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	PHENOL	10 ND	--	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	POTASSIUM	14,000 --	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	PYRENE	10 ND	3,000	ug/L	SVOA	0002F021	
IR-18	IR18MW21A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	SILVER	1.3 ND	74.3	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	SODIUM	121,000 --	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	STYRENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	THALLIUM	3.2 ND	130	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	TOLUENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	TOXAPHENE	0.6 ND	--	ug/L	PEST	0002F021	
IR-18	IR18MW21A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	TRICHLOROETHENE	10 ND	2,000	ug/L	VOA	0002F021	
IR-18	IR18MW21A	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002F021	
IR-18	IR18MW21A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F021	
IR-18	IR18MW21A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F021	
IR-18	IR18MW21A	ZINC	195 --	810	ug/L	DMETAL	0002F021	
IR-23	**UT03MW11A**	**SENTINEL MONITORING WELL**						
IR-23	UT03MW11A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	1,2-DICHLOROETHENE (TOTAL)	10 ND	224,000	ug/L	VOA	0002F003	
IR-23	UT03MW11A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	ACETONE	10 ND	--	ug/L	VOA	0002F003	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-23	UT03MW11A	ALUMINUM	15.5 ND	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	ANTIMONY	2.2 ND	5,000	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	ANTIMONY	5.4 --	5,000	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	ARSENIC	2.5 ND	360	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	ARSENIC	3.2 ND	360	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	BARIUM	85.1 --	5,040	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	BARIUM	683 --	5,040	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	BENZENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	BERYLLIUM	0.1 ND	14	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	BERYLLIUM	0.1 ND	14	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	BROMOFORM	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	CADMIUM	0.2 ND	93	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	CADMIUM	0.2 ND	93	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	CALCIUM	26,000 --	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	CALCIUM	26,200 --	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	CHROMIUM	5.3 ND	157	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	CHROMIUM	6.5 ND	157	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F003	
IR-23	UT03MW11A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	COBALT	1.3 ND	208	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	COBALT	1.3 ND	208	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	COPPER	1.6 ND	280	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	COPPER	1.6 ND	280	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F003	
IR-23	UT03MW11A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F003	
IR-23	UT03MW11A	IRON	18 --	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	IRON	64.5 --	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	LEAD	1.3 ND	144	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	LEAD	1.3 ND	144	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	MAGNESIUM	134,000 --	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	MAGNESIUM	130,000 --	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	MANGANESE	146 --	81,400	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	MANGANESE	144 --	81,400	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	MERCURY	0.1 ND	6	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	MERCURY	0.12 ND	6	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	MOLYBDENUM	0.9 ND	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	MOLYBDENUM	2 ND	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	MOTOR OIL RANGE ORGANICS	300 --	--	ug/L	TPHEXT	0002F003	
IR-23	UT03MW11A	NICKEL	6.4 --	965	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	NICKEL	7.9 --	965	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	POTASSIUM	22,900 --	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	POTASSIUM	22,500 --	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	SELENIUM	2.5 ND	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	SILVER	1 ND	74.3	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	SILVER	1 ND	74.3	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	SODIUM	550,000 --	--	ug/L	TMETAL	0002F003	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-23	UT03MW11A	SODIUM	522,000 --	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	STYRENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	THALLIUM	3.2 ND	130	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	THALLIUM	3.2 ND	130	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	TOLUENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	TRICHLOROETHENE	10 ND	2,000	ug/L	VOA	0002F003	
IR-23	UT03MW11A	VANADIUM	1.8 ND	--	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	VANADIUM	3.1 --	--	ug/L	DMETAL	0002F003F	
IR-23	UT03MW11A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F003	
IR-23	UT03MW11A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F003	
IR-23	UT03MW11A	ZINC	3.9 ND	810	ug/L	TMETAL	0002F003	
IR-23	UT03MW11A	ZINC	142 --	810	ug/L	DMETAL	0002F003F	
IR-25	**IR25MW17A**	**SENTINEL MONITORING WELL**						
IR-25	IR25MW17A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	1,2-DICHLOROETHENE (TOTAL)	10 ND	224,000	ug/L	VOA	0002P002	
IR-25	IR25MW17A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	2-BUTANONE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	2-HEXANONE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	ACETONE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	ANTIMONY	4.2 --	5,000	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	ARSENIC	6.2 ND	360	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	BARIUM	222 --	5,040	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	BENZENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	BERYLLIUM	1.5 ND	14	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	BROMOFORM	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	CADMIUM	0.2 ND	93	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	CALCIUM	159,000 --	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	CHLOROFORM	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	CHROMIUM	2.6 ND	157	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002P002A	
IR-25	IR25MW17A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	COBALT	11.7 --	208	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	COPPER	8 ND	280	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	DIESEL RANGE ORGANICS	100 ND	1,250.00	ug/L	TPHEXT	0002P002A	
IR-25	IR25MW17A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P002A	
IR-25	IR25MW17A	IRON	148 ND	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	LEAD	1.3 ND	144	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	MAGNESIUM	854,000 --	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	MANGANESE	5,250 --	81,400	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	MERCURY	0.14 ND	6	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	MOLYBDENUM	6.2 ND	--	ug/L	DMETAL	0002P002A	

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JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-25	IR25MW17A	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002P002A	
IR-25	IR25MW17A	NICKEL	80.6 --	965	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	POTASSIUM	2,450 --	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	SELENIUM	2.2 ND	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	SILVER	1.3 ND	74.3	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	SODIUM	243,000 --	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	STYRENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	THALLIUM	5.3 --	130	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	TOLUENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	TRICHLOROETHENE	10 ND	2,000	ug/L	VOA	0002P002	
IR-25	IR25MW17A	VANADIUM	4.4 --	--	ug/L	DMETAL	0002P002A	
IR-25	IR25MW17A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002P002	
IR-25	IR25MW17A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002P002	
IR-25	IR25MW17A	ZINC	175 --	810	ug/L	DMETAL	0002P002A	
IR-26	**IR26MW41A**	**POC MONITORING WELL**						
IR-26	IR26MW41A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	9950F001	
IR-26	IR26MW41A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	2-BUTANONE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	2-HEXANONE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	ACETONE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	ALUMINUM	14.3 ND	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	ANTIMONY	2.7 ND	500	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	ARSENIC	1.9 ND	36	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	BARIUM	38.5 --	504	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	BENZENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	BERYLLIUM	0.2 ND	1.4	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	BROMOFORM	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	BROMOMETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	CADMIUM	0.3 ND	9.3	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	CALCIUM	38,900 --	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	CHLOROBENZENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	CHLOROETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	CHLOROFORM	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	CHLOROMETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	CHROMIUM	0.9 ND	15.7	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	CHROMIUM VI	10 ND	--	ug/L	CHROM	9950F001	
IR-26	IR26MW41A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	COBALT	2.8 --	20.8	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	COPPER	1.7 ND	28	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	ETHYLBENZENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	9950F001	
IR-26	IR26MW41A	IRON	908 --	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	LEAD	1 ND	14.4	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	MAGNESIUM	124,000 --	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	MANGANESE	1,730 --	8,140	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	9950F001	

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HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-26	IR26MW41A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	MOLYBDENUM	2.6 --	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	NICKEL	36.5 --	96.5	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	POTASSIUM	1,340 --	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	PROPANE, 2-METHOXY-2-METHYL-	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	SELENIUM	2.4 ND	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	SILVER	1.9 ND	7.43	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	SODIUM	261,000 --	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	STYRENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	THALLIUM	5.5 ND	13	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	TOLUENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	TPH-EXTRACTABLE UNKNOWN HYDROCARBON	100 ND	--	ug/L	TPHEXT	9950F001	
IR-26	IR26MW41A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	9950F001	
IR-26	IR26MW41A	VANADIUM	9.9 --	--	ug/L	DMETAL	9950F001	
IR-26	IR26MW41A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	9950F001	
IR-26	IR26MW41A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	9950F001	
IR-26	IR26MW41A	ZINC	9.2 ND	81	ug/L	DMETAL	9950F001	
IR-26	**IR26MW45A**	**POC MONITORING WELL**						
IR-26	IR26MW45A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002F008	
IR-26	IR26MW45A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	ACETONE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	ALUMINUM	24.2 ND	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	ANTIMONY	7.2 --	500	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002F008	
IR-26	**IR26MW45A**	**BARIUM**	**744 --**	**504**	**ug/L**	**DMETAL**	**0002F008**	
IR-26	IR26MW45A	BENZENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	BERYLLIUM	0.1 ND	1.4	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	BROMOFORM	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	CALCIUM	174,000 --	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	CHROMIUM	6.4 ND	15.7	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F008	
IR-26	IR26MW45A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	COBALT	1.4 ND	20.8	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	COPPER	1.6 ND	28	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F008	
IR-26	IR26MW45A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F008	
IR-26	IR26MW45A	IRON	602 --	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F008	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-26	IR26MW45A	MAGNESIUM	496,000 --	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	MANGANESE	505 --	8,140	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	MOLYBDENUM	3.6 ND	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	MOTOR OIL RANGE ORGANICS	100 --	--	ug/L	TPHEXT	0002F008	
IR-26	IR26MW45A	NICKEL	21.3 --	96.5	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	POTASSIUM	161,000 --	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	SILVER	1 ND	7.43	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	SODIUM	3,550,000 --	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	STYRENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	THALLIUM	4.9 ND	13	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	TOLUENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F008	
IR-26	IR26MW45A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002F008	
IR-26	IR26MW45A	VANADIUM	6.4 --	--	ug/L	DMETAL	0002F008	
IR-26	IR26MW45A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F008	
IR-26	IR26MW45A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F008	
IR-26	**IR26MW45A**	**ZINC**	**200 --**	**81**	**ug/L**	**DMETAL**	**0002F008**	
IR-46	**IR46MW37A**	**POC MONITORING WELL**						
IR-46	IR46MW37A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	1,2-DICHLOROETHENE (TOTAL)	10 ND	22,400	ug/L	VOA	0002F007	
IR-46	IR46MW37A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	ACETONE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	ANTIMONY	2.2 ND	500	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	ARSENIC	2.5 ND	36	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	BARIUM	168 --	504	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	BENZENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	BERYLLIUM	0.1 ND	1.4	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	BROMOFORM	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	CALCIUM	17,800 --	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F007	
IR-46	IR46MW37A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	COBALT	1.3 ND	20.8	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	COPPER	1.6 ND	28	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F007	
IR-46	IR46MW37A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F007	

SUMMARY OF ANALYTICAL RESULTS WITH TRIGGER LEVELS
JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-46	IR46MW37A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F007	
IR-46	IR46MW37A	IRON	75.7 --	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	MAGNESIUM	201,000 --	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	MANGANESE	35.6 --	8,140	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	MOLYBDENUM	2.3 ND	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002F007	
IR-46	IR46MW37A	NICKEL	2.9 --	96.5	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	POTASSIUM	3,820 --	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	SILVER	1 ND	7.43	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	SODIUM	128,000 --	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	STYRENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	THALLIUM	3.2 ND	13	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	TOLUENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	TRICHLOROETHENE	10 ND	200	ug/L	VOA	0002F007	
IR-46	IR46MW37A	VANADIUM	1.8 ND	--	ug/L	DMETAL	0002F007	
IR-46	IR46MW37A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F007	
IR-46	IR46MW37A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F007	
IR-46	IR46MW37A	ZINC	11 ND	81	ug/L	DMETAL	0002F007	
IR-61	**IR61MW05A**	**SENTINEL MONITORING WELL**						
IR-61	IR61MW05A	1,1,1-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	1,1,2,2-TETRACHLOROETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	1,1,2-TRICHLOROETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	1,1-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	1,1-DICHLOROETHENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	1,2-DICHLOROETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	1,2-DICHLOROETHENE (TOTAL)	10 ND	224,000	ug/L	VOA	0002F013	
IR-61	IR61MW05A	1,2-DICHLOROPROPANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	2-BUTANONE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	2-HEXANONE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	4-METHYL-2-PENTANONE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	ACETONE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	ALUMINUM	48.5 ND	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	ANTIMONY	5.2 --	5,000	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	ARSENIC	2.5 ND	360	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	BARIUM	953 --	5,040	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	BENZENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	BERYLLIUM	0.18 ND	14	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	BROMODICHLOROMETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	BROMOFORM	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	BROMOMETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	CADMIUM	0.66 ND	93	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	CALCIUM	57,100 --	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	CARBON DISULFIDE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	CARBON TETRACHLORIDE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	CHLOROBENZENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	CHLOROETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	CHLOROFORM	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	CHLOROMETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	CHROMIUM	4.1 ND	157	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002F013	
IR-61	IR61MW05A	CIS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	COBALT	6.1 ND	208	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	COPPER	1.6 ND	280	ug/L	DMETAL	0002F013	

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JANUARY TO MARCH 2000 SECOND QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
IR-61	IR61MW05A	DIBROMOCHLOROMETHANE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002F013	
IR-61	IR61MW05A	ETHYLBENZENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002F013	
IR-61	IR61MW05A	IRON	326 --	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	LEAD	1.3 ND	144	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	MAGNESIUM	372,000 --	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	MANGANESE	393 --	81,400	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	MERCURY	0.1 ND	6	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	METHYLENE CHLORIDE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	MOLYBDENUM	2.3 ND	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	MOTOR OIL RANGE ORGANICS	200 --	--	ug/L	TPHEXT	0002F013	
IR-61	IR61MW05A	NICKEL	17.9 --	965	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	POTASSIUM	3,360 --	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	PROPANE, 2-METHOXY-2-METHYL-	5 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	SILVER	1 ND	74.3	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	SODIUM	368,000 --	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	STYRENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	TETRACHLOROETHENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	THALLIUM	3.2 ND	130	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	TOLUENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	TRANS-1,3-DICHLOROPROPENE	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	TRICHLOROETHENE	10 ND	2,000	ug/L	VOA	0002F013	
IR-61	IR61MW05A	VANADIUM	6 --	--	ug/L	DMETAL	0002F013	
IR-61	IR61MW05A	VINYL CHLORIDE	10 ND	55	ug/L	VOA	0002F013	
IR-61	IR61MW05A	XYLENE (TOTAL)	10 ND	--	ug/L	VOA	0002F013	
IR-61	IR61MW05A	ZINC	152 --	810	ug/L	DMETAL	0002F013	
PA-50	**PA50MW01A**	**POC MONITORING WELL**						
PA-50	PA50MW01A	1,1,1-TRICHLOROETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,1,2,2-TETRACHLOROETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,1,2-TRICHLOROETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,1-DICHLOROETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,1-DICHLOROETHENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,2,4-TRICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,2-DIBROMO-3-CHLOROPROPANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,2-DIBROMOETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,2-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,2-DICHLOROETHANE	0.5 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,2-DICHLOROPROPANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,3-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	1,4-DICHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	2-BUTANONE	5 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	2-HEXANONE	5 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	4-METHYL-2-PENTANONE	5 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	ACETONE	5 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	ALUMINUM	15.5 ND	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	ANTIMONY	3.9 --	500	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	ARSENIC	3.3 ND	36	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	BARIUM	424 --	504	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	BENZENE	0.5 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	BERYLLIUM	0.1 ND	1.4	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	BROMOCHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	BROMODICHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	BROMOFORM	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	BROMOMETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	CADMIUM	0.2 ND	9.3	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	CALCIUM	43,500 --	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	CARBON DISULFIDE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	CARBON TETRACHLORIDE	0.5 ND	--	ug/L	LVOA	0002P005	

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IR Site	Monitoring Well ID	Analyte	Analytical Result (ug/L)	Trigger Level (ug/L)	Units	Analytical Group	Sample Number	Associated Sample Number
PA-50	PA50MW01A	CHLOROBENZENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	CHLOROETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	CHLOROFORM	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	CHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	CHROMIUM	1 ND	15.7	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	CHROMIUM VI	10 ND	--	ug/L	CHROM	0002P005A	
PA-50	PA50MW01A	CIS-1,2-DICHLOROETHENE	1 ND	22,400	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	CIS-1,3-DICHLOROPROPENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	COBALT	1.3 ND	20.8	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	COPPER	1.6 ND	28	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	DIBROMOCHLOROMETHANE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	DIESEL RANGE ORGANICS	100 ND	1,250	ug/L	TPHEXT	0002P005	
PA-50	PA50MW01A	ETHYLBENZENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	GASOLINE RANGE ORGANICS	50 ND	1,250	ug/L	TPHPRG	0002P005	
PA-50	PA50MW01A	IRON	14.8 ND	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	LEAD	1.3 ND	14.4	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	MAGNESIUM	104,000 --	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	MANGANESE	206 --	8,140	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	MERCURY	0.1 ND	0.6	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	METHYLENE CHLORIDE	2 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	MOLYBDENUM	2.8 ND	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	MOTOR OIL RANGE ORGANICS	100 ND	--	ug/L	TPHEXT	0002P005	
PA-50	PA50MW01A	NICKEL	7.5 --	96.5	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	POTASSIUM	5,160 --	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	PROPANE, 2-METHOXY-2-METHYL-	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	SELENIUM	2.5 ND	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	SILVER	1 ND	7.43	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	SODIUM	288,000 --	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	STYRENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	TETRACHLOROETHENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	THALLIUM	3.2 ND	13	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	TOLUENE	1 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	TRANS-1,2-DICHLOROETHENE	1 ND	22,400	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	TRANS-1,3-DICHLOROPROPENE	0.5 ND	--	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	TRICHLOROETHENE	1 ND	200	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	VANADIUM	3.8 --	--	ug/L	DMETAL	0002P005	
PA-50	PA50MW01A	VINYL CHLORIDE	0.5 ND	55	ug/L	LVOA	0002P005	
PA-50	PA50MW01A	XYLENE (TOTAL)	1 ND	--	ug/L	LVOA	0002P005	
PA-50	**PA50MW01A**	**ZINC**	**92 --**	**81**	**ug/L**	**DMETAL**	**0002P005**	

NOTES: Bold font indicates a trigger level exceedance

CHROM	Chromium
DMETAL	Dissolved metal
LVOA	Low-level volatile organic compound
ND	Not detected. Concentration reported is the analytical detection limit
PEST	Pesticide
SVOA	Semivolatile volatile organic compound
TMETAL	Total metal
TPHEXT	Total petroleum hydrocarbon - extractable
TPHPRG	Total petroleum hydrocarbon - *purgeable*
ug/L	Micrograms per milliliter
VOA	Volatile organic compound

APPENDIX B

JANUARY 2000 MONITORING WELL SAMPLING SHEETS

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/12/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs, SVOCs, Pest/PCB, Metals, TPH-E, TPH-P

WELL NO: IR06-MW42A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 13.90 SOFT BOTTOM?:

DEPTH TO WATER: 11.02 TIME: 1232 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 1.87

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 5.6 (L) ACTUAL PURGE VOL. (GAL) 5.0 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1236	11.35	1	15.2	5.42	3.33	1.57		0.07	81
1244	11.96	2	18.7	5.44	1.83	1.57		0.07	2
1249	12.12	2.5	18.6	5.43	3.21	1.57		0.07	2
1256	12.40	3	18.6	5.43	1.98	1.57		0.07	2
1304	12.86	3.75	18.4	5.43	2.31	1.59		0.07	8
1319	13.15	4.5	17.8	5.47	3.32	1.61		0.08	11
1329	13.26	5.0	17.8	5.48	2.99	1.67		0.07	76
1426	12.12	Sample VOCs @ 1405							
1/13 0845	11.09	Sample all else							

GNATURE: for David Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/11/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt/ J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL NO: UT03-MW11A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 19.63 SOFT BOTTOM?: yes

DEPTH TO WATER: 7.69 TIME: 1157 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: na

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) na (L) ACTUAL PURGE VOL. (GAL) 9.0 (L)

PURGE METHOD: Low flow/ peristaltic pump SAMPLING METHOD: Peristaltic pump

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
1127	7.67	initial							
1147	7.67	1.0	18.25	7.45	0.59	3.241	3.699	1.96	199.7
1153	7.69	2	18.16	7.41	0.55	3.115	3.577	1.89	326.2
1200	7.67	3	18.19	7.39	0.66	3.040	3.489	1.84	563.8
1205	7.69	4	18.16	7.38	0.83	2.985	3.429	1.81	412.9
1211	7.69	5	18.17	7.37	0.92	2.940	3.381	1.78	871.5
1215	7.70	6	18.17	7.36	0.89	2.914	3.353	1.77	871.2
1222	7.69	7	18.04	7.36	0.91	2.905	3.353	1.77	1111.6
1230	7.69	8	18.03	7.35	0.90	2.873	3.314	1.74	613.1
1235	7.69	9	18.03	7.35	0.81	2.871	3.309	1.74	573.0
	sample								

SIGNATURE: _____

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/11/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna/ D. Posselt

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 13.19 SOFT BOTTOM?:

DEPTH TO WATER: 6.51 TIME: 1228

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WELL NO: IR06-MW45A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WATER VOLUME IN WELL: na

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) na (L) ACTUAL PURGE VOL. (GAL) na (L)

PURGE METHOD: Low flow/ peristaltic pump SAMPLING METHOD: Peristaltic pump

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1317	6.13	1.0	15.38	6.94	0.92	30.72	37.51	23.78	57.9
1324	6.10	2.0	14.80	6.94	1.22	26.57	32.67	20.33	87.3
1330	6.10	3.0	14.75	7.36	6.91	12.64	15.45	8.95	115.3
1338	6.01	4	14.89	7.26	7.12	12.46	15.41	9.02	122.7
1348	6.08	5	14.97	7.21	6.90	13.32	16.36	9.60	118.0
1357	6.64	6	14.96	7.19	7.49	11.42	14.13	8.22	150.4
1407	6.73	7	14.89	7.08	6.64	14.51	17.96	10.65	164.9
1419	6.76	8	14.90	7.05	6.49	14.85	18.33	10.86	181.0
1426	6.81	8.5	14.81	7.05	6.95	12..91	16.00	9.40	176.0
1430	sample								

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/11/00
PROJECT NAME: Parcel B RAMP Wells
PROJECT LOCATION: Hunters Point
SAMPLER: J. Fortuna
ANALYSES: VOCs, Metals, TPH-E, TPH-P
WELL DEPTH: (from construction detail)

WELL NO: IR07-MW19A
WELL DIAMETER: 4"
TOC ELEV:
LOCK NO:

WELL DEPTH: (measured) 16.85 SOFT BOTTOM?:

DEPTH TO WATER: 9.00 TIME: 1204 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: na

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) na (L)

ACTUAL PURGE VOL. (GAL) na (L)

PURGE METHOD: Low flow/ peristaltic pump

SAMPLING METHOD: Peristaltic pump

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
0941	9.07	initial							
	9.21	1	16.82	6.81	6.43	27.57	27.63		1.7
0959	0922	2	16.74	6.85	6.79	27.72	32.92	20.66	2.0
1006	9.24	3	16.84	6.83	6.86	28.74	34.11	21.49	2.9
1012	9.25	4	16.85	6.83	6.85	29.61	35.04	22.12	10.3
1018	9.27	5	16.87	6.84	6.99	30.12	35.68	22.57	9.2
1023	9.27	6	16.87	6.84	7.03	30.42	36.04	22.82	5.1
1029	9.34	7	16.88	6.84	7.05	30.61	36.30	23.02	82.3
1035	9.32	8	16.79	6.84	7.14	30.84	36.60	23.21	91.8
1042	9.31	9	16.78	6.84	7.14	31.02	36.83	23.37	127.5
1047	9.26	10	16.79	6.84	7.15	31.15	36.95	23.45	117.7
1055	9.25	11	16.77	6.84	7.18	31.37	37.20	23.62	338.2
1100	sample								

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/13/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 23.50 SOFT BOTTOM?:

DEPTH TO WATER: 8.56 TIME: 1201 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 9.7

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

WELL NO: IR07-MW20A1

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

Location Map

CALCULATED PURGE VOL. (GAL) 29.1 (L)

ACTUAL PURGE VOL. (GAL) 29.0 (L)

PURGE METHOD: bailer

SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1030	8.68	4.0	15.5	7.07	5.38	47.2		2.70	10
1035	8.94	8.0	15.6	7.06	5.44	42.3		2.71	19
1038	8.92	12.0	15.6	7.04	5.09	42.5		2.72	32
1044	8.96	16.0	15.5	6.91	5.31	42.5		2.73	28
1049	8.77	20.0	15.7	6.88	5.20	42.6		2.73	37
1053	8.98	23.0	15.7	6.91	5.02	42.7		2.73	41
1056	9.00	26.0	15.8	6.90	5.03	42.7		2.73	40
1100	9.02	29.0	15.8	6.90	5.13	42.7		2.73	41
1110	sample								

GNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/13/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL NO: IR07-MW21A1

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 16.87 SOFT BOTTOM?: no

DEPTH TO WATER: 13.42 TIME: 1143 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 2.8 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 8.4 (L) ACTUAL PURGE VOL. (GAL) 10.0 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
1250	13.60	2.0	16.4	7.36	2.18	2.20		0.10	6
1254	14.02	4.0	16.5	7.37	1.83	2.29		0.11	10
1257	13.98	6.0	16.7	7.42	1.58	2.31		0.11	8
1300	1418	8.0	16.6	7.42	1.87	2.33		0.11	11
1303	1415	10.0	16.7	7.42	1.68	2.33		0.11	18
1313	sample								

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/14/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 16.51 SOFT BOTTOM?: no

DEPTH TO WATER: 14.28 TIME: 1135 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WELL NO: IR07-MW23A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WATER VOLUME IN WELL: 1.4 gal.

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 4.2 (L) ACTUAL PURGE VOL. (GAL) 8.0 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1140	14.34	1.0	17.5	7.51	2.44	1.51		0.06	12
1145	14.40	2.0	17.5	7.55	2.51	1.48		0.06	6
1150	14.42	3.0	17.7	7.58	2.16	1.52		0.07	7
1153	14.42	4.0	17.7	7.59	2.00	1.55		0.07	7
1158	14.43	5.0	17.8	7.60	2.05	1.57		0.07	5
1202	14.41	6.0	17.8	7.64	2.20	1.59		0.07	4
1207	14.42	7.0	17.8	7.63	2.06	1.61		0.07	3
1211	14.44	8.0	17.8	7.64	2.16	1.61		0.07	3
1215	sample								

SIGNATURE: _____

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/14/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 18.67 SOFT BOTTOM?: no

DEPTH TO WATER: 12.23 TIME: 1141 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WELL NO: IR07-MW24A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WATER VOLUME IN WELL: 4.19 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 12.6 (L)

ACTUAL PURGE VOL. (GAL) 19 gal (L)

PURGE METHOD: bailer

SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
0910	12.05	3	15.4	5.89	2.33	2.51		0.13	999
0915	12.08	6	16.0	5.69	2.04	2.35		0.11	999
0920	12.05	9	16.2	5.67	1.68	2.25		0.10	592
0925	12.10	12	16.2	5.66	2.22	2.21		0.10	445
0933	12.10	15	16.4	5.65	2.17	2.20		0.10	278
0936	12.12	17	16.4	5.64	1.97	2.20		0.10	290
0940	12.13	19	16.4	5.63	1.94	2.20		0.10	256
0945	sample								

SIGNATURE: [signature] for Daniel Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/14/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL NO: IR07-MW25A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 21.49 SOFT BOTTOM?:

DEPTH TO WATER: 10.46 TIME: 1138 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 7.17 gal.

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 21.5 (L) ACTUAL PURGE VOL. (GAL) 24 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1137	11.23	3	15.2	5.66	2.70	1.35		0.06	7
1142	11.62	6	15.4	5.67	1.98	1.42		0.06	8
1146	11.69	9	15.4	5.65	2.80	1.47		0.06	33
1150	12.01	12	15.5	5.66	2.63	1.53		0.07	111
1154	12.10	15	15.6	5.66	2.73	1.61		0.07	122
1158	12.07	18	15.6	5.65	2.85	1.63		0.07	117
1201	11.50	20	15.6	5.65	3.24	1.61		0.07	159
1204	11.54	22	15.6	5.65	3.24	1.64		0.07	89
1207	11.73 24		15.6	5.65	3.38	1.61		0.07	87
1215	Sample (0002P012)								
1250	Sample (0002P013)-MS/MSD								

SIGNATURE: for Daniel Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/14/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 17.90 SOFT BOTTOM?: no

DEPTH TO WATER: 11.46 TIME: 1153 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WELL NO: IR07-MW26A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WATER VOLUME IN WELL: 4.19 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 12.6 (L) ACTUAL PURGE VOL. (GAL) 16 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
1242	11.46	3	15.7	5.73	4.88	41.9		2.68	261
1249	11.54	6	15.6	5.78	5.11	42.8		2.74	357
1252	11.61	9	15.5	5.80	5.66	42.9		2.75	474
1257	11.59	12	15.5	5.81	5.52	43.0		2.75	356
1300	11.63	14	15.5	5.80	5.44	43.1		2.75	296
1303	11.69	16	15.5	5.81	5.51	43.1		2.76	276
1310	sample								

SIGNATURE: for Daniel Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/13/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL NO: IR07-MW27A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 21.03 SOFT BOTTOM?:

DEPTH TO WATER: 13.55 TIME: 1146 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 4.9

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 14.7 (L)

ACTUAL PURGE VOL. (GAL) 16.0 (L)

PURGE METHOD: bailer

SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1147	15.48	3.0	17.3	7.27	1.51	1.49		0.06	68
1152	16.76	6.0	17.7	7.31	1.49	1.50		0.06	123
1156	17.72	9.0	17.6	7.34	1.52	1.52		0.07	213
1200	18.04	12.0	17.7	7.34	1.50	1.50		0.06	243
1204	18.60	14.0	17.7	7.42	1.62	1.49		0.06	193
1208	18.75	16.0	17.7	7.37	1.57	1.48		0.06	103
1215	sample								

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/14/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs (low-level), SVOCs, Pest/PCB, Metals, TPH-E, TPH-P

WELL NO: IR07-MW28A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 17.87 SOFT BOTTOM?:

DEPTH TO WATER: 10.48 TIME: 1128 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 4.8 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 14.4 (L)

ACTUAL PURGE VOL. (GAL) 23.0 (L)

PURGE METHOD: bailer

SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
0856	10.98	3.0	15.7	7.37	1.88	1.64		0.07	136
0859	11.16	6.0	16.1	7.44	1.51	1.77		0.08	267
0902	11.18	9.0	16.2	7.48	1.69	1.80		0.08	315
0905	11.08	12.0	16.2	7.50	1.97	1.81		0.08	375
0907	10.97	14.0	16.3	7.53	1.76	1.83		0.08	333
0910	10.91	16.0	16.4	7.58	1.94	1.84		0.08	292
0913	11.06	19.0	16.4	7.60	1.98	1.83		0.08	359
0915	10.92	21.0	16.4	7.60	1.89	1.85		0.08	311
0918	10.94	23.0	16.4	7.60	1.90	1.84		0.08	342
0930	sample								
1010	Duplicate sample 0002F020								

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/13/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 18.25 SOFT BOTTOM?: no

DEPTH TO WATER: 11.27 TIME: 1155 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 4.54 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

WELL NO: IR07-MWS2

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

Location Map

CALCULATED PURGE VOL. (GAL) 13.6 (L) ACTUAL PURGE VOL. (GAL) 18 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1330	11.38	3	15.7	5.67	2.42	36.9		2.33	41
1336	12.62	6	15.9	5.69	2.82	32.3		2.01	61
1340	12.28	9	15.7	5.70	4.24	29.1		1.80	119
1346	12.93	12	15.6	5.70	3.99	28.1		1.72	255
1351	13.41	15	15.6	5.68	4.21	28.4		1.75	329
1355	13.82	18	15.5	5.67	5.03	28.4		1.75	551
1357	sample								

SIGNATURE: for Daniel Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/13/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL NO: IR07-MWS-4

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 20.76 SOFT BOTTOM?:

DEPTH TO WATER: 14.54 TIME: 1148 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 4.0 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 12.0 (L) ACTUAL PURGE VOL. (GAL) 16.0 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
1344	14.78	2.0	16.6	6.93	2.08	17.1		1.01	38
1347	14.74	4.0	16.8	6.97	1.95	18.6		1.10	46
1349	14.83	6.0	16.9	6.96	1.53	19.3		1.14	50
1352	14.78	8.0	16.9	6.97	1.67	19.7		1.17	85
1355	14.77	10.0	16.9	6.98	1.64	20.4		1.21	97
1359	14.74	12.0	16.9	7.00	2.01	20.9		1.25	121
1401	14.72	14.0	16.9	7.00	1.70	21.4		1.28	165
1404	14.73	16.0	16.9	7.00	1.62	21.1		1.27	198
1414	sample								

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/12/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs (low-level), Metals, TPH-E, TPH-P

WELL NO: IR10-MW31A1

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 17.14 SOFT BOTTOM?: no

DEPTH TO WATER: 9.29 TIME: 1219 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 5.0 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 15.0 (L) ACTUAL PURGE VOL. (GAL) 18.0 (L)

PURGE METHOD: Purge pump SAMPLING METHOD: purge pump

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1401	10.68	3.0	17.8	7.08	1.49	17.3		1.01	12
1404	10.94	6.0	17.9	7.12	1.42	17.1		1.01	3
1407	11.18	9.0	18.0	7.12	1.98	17.0		1.00	4
1411	11.27	12.0	18.0	7.11	1.67	17.0		1.00	2
1413	11.13	14.0	18.1	7.15	1.30	17.4		1.02	20
1416	11.18	16.0	18.1	7.14	1.60	16.9		0.99	1
1419	11.24	18.0	18.1	7.17	1.57	16.9		0.99	7
1425	Sample								

SIGNATURE: _____

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/12/00
PROJECT NAME: Parcel B RAMP Wells
PROJECT LOCATION: Hunters Point
SAMPLER: J. Fortuna
ANALYSES: VOCs, Metals, TPH-E, TPH-P
WELL DEPTH: (from construction detail)

WELL NO: IR10-MW28A
WELL DIAMETER: 2"
TOC ELEV:
LOCK NO:

WELL DEPTH: (measured) 17.25 SOFT BOTTOM?: no

DEPTH TO WATER: 11.12 TIME: 1216 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 0.98 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 2.94 (L) ACTUAL PURGE VOL. (GAL) 1.0 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDI
1345	dry	1.0	15.0	7.33	2.60	4.59		0.23	442
1452	15.58	Sample VOCs							
1/13 0826	13.64	Not yet at 80%, cannot sample							
1/14 1313	12.53	Sample metals, TPH-P, 1 amber for TPH-E							

SIGNATURE: _____

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/14/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, SVOCs, Pest/PCB, Metals, TPH-E, TPH-P

WELL NO: IR18-MW21A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 18.93 SOFT BOTTOM?: no

DEPTH TO WATER: 15.69 TIME: 1133 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 2.1 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 6.3 (L) ACTUAL PURGE VOL. (GAL) 2.5 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND.	S.C. (M.S.)	SALINITY (%)	TURBIDITY
0935	dry	2.5							
1050	15.75	sample							

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 12/17/99
PROJECT NAME: Parcel B RAMP Wells
PROJECT LOCATION: Hunters Point
SAMPLER: J. Fortuna
ANALYSES: VOCs, Metals, TPH-E, TPH-P
WELL DEPTH: (from construction detail)

WELL NO: IR26-MW41A
WELL DIAMETER: 4"
TOC ELEV:
LOCK NO:

WELL DEPTH: (measured) 20.9 SOFT BOTTOM?: no

DEPTH TO WATER: 7.09 - 6.53 TIME: 1316 1/10- 1225 12/17

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 9.4 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]
[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 28.2 (L) ACTUAL PURGE VOL. (GAL) 34 (L)

PURGE METHOD: pump SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDI
1239	8.10	4	18.8	4.72	0.89	5.90			10
1244	9.85	8	18.6	4.42	0.49	1.21		0.05	10
1247	11.37	12	18.7	4.43	0.89	1.22		0.05	-10
1251	12.62	16	18.8	4.48	1.33	1.37		0.06	-10
1255	13.65	20	18.8	4.57	1.08	1.69		0.07	-10
1300	14.42	24	18.9	4.65	1.47	1.98		0.09	-10
1306	13.84	28	18.9	4.70	1.69	2.56		0.12	-10
1309	14.04	30	18.8	4.59	2.58	1.68		0.07	-10
1312	13.81	32	18.9	4.60	2.55	1.68		0.07	-10
1315	13.72	34	18.9	4.57	2.57	1.66		0.07	-10

SIGNATURE: _____

WATER VOL. IN DRUM:
NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/12/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL NO: IR26-MW45A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 15.83 SOFT BOTTOM?: no

DEPTH TO WATER: 7.20 TIME: 1235 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 5.6 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 16.8 (L) ACTUAL PURGE VOL. (GAL) 23.0 (L)

PURGE METHOD: Purge pump SAMPLING METHOD: Purge pump/ bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1132	7.05	inital							
1135	8.87	3.0	18.0	6.80	0.94	29.3		1.81	8
1140	9.89	6.0	17.7	6.97	2.19	21.6		1.30	75
1143	11.25	9.0	18.0	6.98	1.81	22.6		1.37	165
1146	11.71	12.0	18.2	6.99	1.53	24.7		1.51	100
1150	13.04	15.0	18.2	6.95	1.78	25.1		1.53	36
1154	13.52	17.0	18.3	6.86	1.99	26.8		1.64	18
1157	13.53	19.0	18.4	6.98	2.08	25.5		1.56	85
1201	14.29	21.0	18.3	6.98	4.80	22.5		1.46	8
1206	14.68	23.0	18.2	6.93	3.29	23.1		1.40	2
1215	sample								

SIGNATURE: _____

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/12/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 21.00 SOFT BOTTOM?: no

DEPTH TO WATER: 7.73 TIME: 1223 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WELL NO: IR46-MW37A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WATER VOLUME IN WELL: 8.0 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 24.0 (L)

ACTUAL PURGE VOL. (GAL) 28.0 (L)

PURGE METHOD: Purge pump

SAMPLING METHOD: Purge pump

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
0934	9.29	3.0	18.0	7.22	1.12	2.36		0.11	129
0938	10.32	6.6	18.1	7.29	0.95	2.24		0.10	34
0941	10.80	9.0	18.2	7.37	0.86	2.26		0.10	22
0944	11.02	12.0	18.4	7.42	3.92	2.27		0.10	31
0947	11.33	15.0	18.4	7.51	1.15	2.27		0.10	27
0950	11.84	18.0	18.5	7.46	1.01	2.24		0.10	16
0953	11.38	20.0	18.5	7.48	0.78	2.26		0.10	16
0956	11.37	22.0	18.6	7.52	0.80	2.32		0.11	11
0959	11.54	24.0	18.6	7.55	0.80	2.33		0.11	15
1002	11.68	26.0	18.7	7.59	0.89	2.29		0.11	11
1005	11.81	28.0	18.7	7.58	0.83	2.29		0.11	14
1015	sample								

SIGNATURE:

WATER VOL. IN DRUM:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/13/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: J. Fortuna

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 20.83 SOFT BOTTOM?: no

DEPTH TO WATER: 7.87 TIME: 1210

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WELL NO: IR61-MW05A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WATER VOLUME IN WELL: 8.4 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 25.2 (L)

ACTUAL PURGE VOL. (GAL) 27.0 (L)

PURGE METHOD: Purge pump/bailer

SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
0857	9.82	3.0	15.9	7.37	1.33	3.98		0.20	2
0901	11.68	6.0	15.8	7.50	1.53	4.03		0.20	1
0904	13.01	9.0	15.9	7.55	1.27	4.01		0.20	2
0909	14.95	12.0	16.1	7.55	0.98	3.98		0.20	2
0914	15.71	15.0	16.4	7.55	0.84	4.07		0.20	2
0920	16.53	18.0	16.4	7.52	0.58	4.15		0.21	1
0931	16.79	21.0	16.3	7.36	2.38	4.19		0.21	80
0939	18.40	24.0	16.3	7.31	2.16	4.38		0.22	290
0945	19.31	27.0	16.5	7.35	2.92	4.44		0.22	999
0950	sample								

SIGNATURE:

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/13/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs (low-level), Metals, TPH-E, TPH-P

WELL NO: PA50-MW01A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: 15.98 (measured) SOFT BOTTOM?: no

DEPTH TO WATER: 8.27 TIME: 1207

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 5.01 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 15.0 (L) ACTUAL PURGE VOL. (GAL) 21.0 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
1043	8.30	3	16.8	5.64	3.23	2.39		0.11	103
1100	8.30	6	16.9	5.72	2.28	2.25		0.10	24
1151	8.32	9	17.1	5.72	1.82	2.33		0.11	85
1153	8.33	12	17.2	5.68	1.51	2.29		0.11	120
1202	8.34	15	17.2	5.69	1.89	2.28		0.11	65
1207	8.34	18	17.2	5.69	1.96	2.27		0.10	55
1212	8.33	21	17.1	5.70	1.93	2.27		0.10	53
1220	sample								

SIGNATURE: for Daniel Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/12/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs, Metals, TPH-E, TPH-P

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 19.96 SOFT BOTTOM?: no

DEPTH TO WATER: 8.53 TIME: 1226 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 7.43 gal

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

WELL NO: IR25-MW17A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

Location Map

CALCULATED PURGE VOL. (GAL) 22.29 (L)

ACTUAL PURGE VOL. (GAL) 15.5 (L)

PURGE METHOD: bailer

SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBIDITY
1114	10.85	3	17.2	5.35	2.38	5.75		0.30	28
1120	13.36	6	17.7	5.35	2.09	5.95		0.31	27
1126	14.92	9	17.8	5.34	1.98	6.17		0.32	13
1139	18.35	13	18.0	5.34	1.98	6.44		0.34	38
1146	dry	15.5	15.6	5.36	9.55	6.85		0.36	86
1346	18.15	Not yet 80%							
1359	Sample VOCs								
1/13 1010	1615	Not 80%							
1/14 1353	13.89								
1400	Sample all else								

SIGNATURE: for Daniel Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

RECORD OF WATER SAMPLING

PROJECT NO: CTO-270 DATE: 1/12/00

PROJECT NAME: Parcel B RAMP Wells

PROJECT LOCATION: Hunters Point

SAMPLER: D. Posselt

ANALYSES: VOCs (low-level)

WELL NO: IR10-MW33A

WELL DIAMETER: 4"

TOC ELEV:

LOCK NO:

WELL DEPTH: (from construction detail)

WELL DEPTH: (measured) 15.03 SOFT BOTTOM?:

DEPTH TO WATER: 8.09 TIME: 1213 1/10

PRESSURE (circle one)?: YES NO

IF YES WAS PRESSURE (circle one) positive negative

WATER VOLUME IN WELL: 4.51

[2-INCH CASING=0.16 GAL/FT] [4-INCH CASING=0.65 GAL/FT]

[6-INCH CASING=1.47 GAL/FT] [1 GAL=3.78L]

Location Map

CALCULATED PURGE VOL. (GAL) 13.5 (L) ACTUAL PURGE VOL. (GAL) 19 (L)

PURGE METHOD: bailer SAMPLING METHOD: bailer

TIME	D.T.W. (ft)	VOL. (gal)	TEMP (C)	pH	D.O. (ppm)	COND. (mS/cm)	S.C. (M.S.)	SALINITY (%)	TURBID
1450	8.61	3	14.6	5.61	4.07	5.64		0.29	20
1459	8.89	6	14.7	5.48	3.94	5.62		0.29	31
1506	9.20	9	14.9	5.44	2.55	4.18		0.21	66
1509	8.64	12	15.2	5.42	3.27	5.50		0.28	459
1511	12.50	15	15.6	5.42	3.77	6.97		0.37	825
1513	12.44	17	15.7	5.42	3.32	6.45		0.34	999
1516	12.38	19	15.4	5.39	2.55	6.12		0.32	369
1516	sample								

SIGNATURE: for Daniel Posselt

WATER VOL. IN DRUM:

NEED NEW DRUM?:

APPENDIX C

JANUARY 2000 SAMPLES CHAIN-OF-CUSTODY RECORDS

Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
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Fax 415-543-5480

Chain of Custody Record

PO#: 992285	Lab: Curtis & Tompkins (510) 486 0900	
Project name: Parcel B RAMP Wells	TtEMI technical contact: Rameen Moezzi (415) 222-8278	Field samplers: J. Fortuna
Project number: CTO 270	TtEMI project manager: Tom Sheff (415) 222-8347	Field samplers' signatures: [signature]

Preservative Added

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar				CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex. Chromium								
9950F001	MS/MSD IR26MW41A	12/17/99	1315	Water	—	—	2	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—
~~9950F002~~	~~Equipment Blank~~	~~12/17/99~~		~~Water~~	—	—	1	—	—	—	—	—	—	—	—	—	—	—	X	—	—	—	—	—	—	—	—

[signature] 12/17/99

	Signature	Name (print)	Company Name	Date	Time
Relinquished by:	[signature]	John Fortuna	R+M Environmental	12/17/99	3:20P
Received by:	[signature]	Steve Stanley	C&T	12/17/99	3:20P
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

Turnaround time/remarks: yellow copy mistakenly sent to lab.

0436

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143360

Chain of Custody Record

Page 1 of 1

PO#	Lab:
99-285	Curtis & Tompkins (510) 486-0900
Project name: Parcel B RAMP Wells	**TtEMI technical contact:** Rameen Moezzi (415)222-8278
Project number: CTO-270	**TtEMI project manager:** Tom Shott (415) 222-8347
	Field samplers: J-Fortuna / D. Possett
	Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex. Chromium
0002F002		1/11/00	1100	Water			1										X
0002F003			1235				1										X
0002F004			1430				1										X
0002F005			1517				1										X

1/11/99

	Name (print)	Company Name	Date	Time
Relinquished by:	Daniel Possett	R&M Environmental	1/11/00	1637
Received by:	Stevan Stanley	C&T	1/11/00	1637
Relinquished by:				
Received by:				
Relinquished by:		Received over the counter cold and intact		
Received by:		CW 1/11/00		

Turnaround time/remarks:

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San Francisco Office
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San Francisco, CA 94105
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Fax 415-543-5480

IU3382

Chain of Custody Record

Project name: Parcel B Ramp Wells	PO#: 99-2285	Lab: Curtis & Tompkins (510) 486 0900	
Project number: CTO -270	TtEMI technical contact: Ranen Molezzi (415) 222-8278	Field samplers: J. Fortuna	
	TtEMI project manager: Tom Shaff (415) 222-8347	Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Chromium
1 0002F007	MS/MSD	1/12/00	1015	water			2										X
2 0002F008			1215				1										X
3 0002F010			1425				1										X
4 0002F011		↓	1515	↓			1										X

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R+M Environmental	1/12/00	1545
Received by:	Daniel Posselt	R+M Environmental	1/12/00	1545
Relinquished by:	Daniel Posselt	R+M	1/12/00	1640
Received by:	Lisa Bennetts	CT	1-12-00	4:40
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

TEMP. RECEIVED: overcontainer chilled
RECEIVED BY:

WHITE - Laboratory Copy YELLOW - Project Office Copy

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Chain of Custody Record

Page 1 of 1

PO#	Lab: (510) 486 0900
99-285	Curtis & Tompkins
Project name: Parcel B RAMP Wells	**TtEMI technical contact:** Ramsey Muezzi (415)222-8278
Project number: CTO-270	**TtEMI project manager:** Tom Shaff (415) 222-8347
	Field samplers: J. Fortuna / D. Posselt
	Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Chromium
1 - 0002FD13		1/13/00	0950	Water			1										X
2 - 0002FD14			1110				1										X
3 - 0002FD15			1215				1										X
4 - 0002FD16			1313				1										X
5 - 0002FD17			1450				1										X
6 - 0002P003A			0924				1										X
7 - 0002P005A			1221				1										X
8 - 0002P007			1357				1										X
9 - 0002P008			1429				1										X
10 - 0002P009			1414				1										X

	Name (print)	Company Name	Date	Time
Relinquished by: Daniel Posselt	Daniel Posselt	R&M Environmental	1/13/00	1736
Received by: Traj Bahjat	Tracy Bahjat	C&T	1/13/00	1737
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

recieved cold 50c
TD 1/13/00

WHITE: Laboratory YELLOW: Project Office Copy

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Chain of Custody Record

143428

Page 1 of

Project name: Parcel B RAMP Wells	PO# 99-285	Lab: Curtis & Tompkins (510) 486 0900	
Project number: CTO-270	TtEMI technical contact: Ramen Morrison (415) 222-8278	Field samplers: J. Fortuna / D. Posselt	
	TtEMI project manager: Tom Shott (415) 222-8347	Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added: Hex Chromium	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
ØØØ2 FØ19	-1	1/14/00	0930	water	-	1				X						
ØØØ2 FØ20	-2		1010		-	1				X						
ØØØ2 FØ21	-3		1050		-	1				X						
ØØØ2 FØ22	-4		1215		-	1				X						
ØØØ2 FØØ9A	-5		1313		-	1				X						
ØØØ2 FØ23	-6		1409		-	1				X						
ØØØ2 PØ11	-7		0945		-	1				X						
ØØØ2 PØ12	3 MS/MSD -8		1215		-	1				X						
ØØØ2 PØ13	-9		1250		-	1				X						
ØØØ2 PØ14	-10		1310		-	1				X						
ØØØ2 PØØ2A	-11		1400		-	1				X						

	Name (print)	Company Name	Date	Time
Relinquished by: Daniel Posselt	Daniel Posselt	R+M Envr.	1/14/00	1723
Received by: Carol Wortham	Carol Wortham	C+T	1/14/00	1723
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Received cold and intact over the counter.

0435

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Chain of Custody Record

Page 1 of 1

0906

PO#	Lab:
992262.MOD 001	Severn Trent (802)655-1203
Project name: Parcel B Ramp wells	**TtEMI technical contact:** Ramela Moezzi (415) 222-8278
Project number: CTO 270	**TtEMI project manager:** Tom Shott (415) 222-8347
	Field samplers: J. Fortuna
	Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
9950F001	MS/MSD	12/17/99	1315	Water	8	4	2			X			X	X	X
9950F002		12/17/99	1350	Water	2					X					

Preservative Added

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R+M Environmental	12/17/99	1600
Received by: Relinquished to FEDEX				
Relinquished by:				
Received by:	Don Daniels	STL	12/18/99	1015
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Standard

FedEx Airbill # 8121 8868 1680

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0438

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Chain of Custody Record

Page 1 of 1

PO#	Lab: (802)
99-262 Mod 1	Severn Trent 655-1203

Project name:	TtEMI technical contact:	Field samplers:
Parcel B RAMP wells	Rameen Moezzi (415)222-8278	J. Fortuna / D. Posselt
Project number:	**TtEMI project manager:**	**Field samplers' signatures:**
CTO-270	Tom Shott (415) 222-8347	

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added: HCl	HNO3	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	CLP Metals (Filtered)
0002F001		1/11/00	0751	Water	2							X						
0002F002			1100		4	2	2					X			X	X	X	X
0002F003			1235		4	2	2					X			X	X	X	X
0002F004			1430		4	2	2					X			X	X	X	X
0002F005			1517		4	2	2					X			X	X	X	X
		1/11/00																

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R+M Environmental	1/11/00	1700
Received by: Relinquished to FEDEX				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:	Scott Lavigne	STL	1/12/00	1000

Turnaround time/remarks: Standard

FedEx Airbill # 8122 0276 9418

0431

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Chain of Custody Record

Page 1 of

PO#	Lab:
99-262 Mod 1	Severn Trent (802) 655-1203

Project name:	TtEMI technical contact:	Field samplers:
Parcel B Ramp Wells	Rameen Moezzi (415)222-8278	J. Fortuna/D. Poxelt
Project number:	**TtEMI project manager:**	**Field samplers' signatures:**
CTO-270	Tom Shaff (415)222-8347	

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added: HCl	HNO3 HCl	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
0002F006		1/12/00	0800	Water	2							X					
0002F007	MS/MSD		1015		8	4	2					X			X	X	X
0002F008			1215		4	2	1					X			X	X	X
0002F009			1452		2							X					
0002F010			1425		4	2	1					X			X	X	X
0002F011			1515		4	2	1					X			X	X	X
0002P001			0830		2							X					
0002P002			1359		2							X					
0002P003			1405		2							X					
0002P004			1516		2							X					

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R+M Environmental	1/12/00	1730
Received by: Relinquished to FEDEX				
Relinquished by:				
Received by:	DON DAWICKI	STC	1/13/00	0930
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: STANDARD VOA analysis for sample 0002F010 is CLP Low-level VOA
" 0002P004 is also CLP Low-level VOA

FedEX Airbill # 8122 0276 9429

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76600 76624

0856

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Chain of Custody Record

PO#: 99-262 Mod 1

Lab: Severn Trent

Project name: Parcel B RAMP Wells

TtEMI technical contact: Ranee Mezzi (415) 222-8278

Field samplers: J. Fortuna

Project number: CTO-270

TtEMI project manager: Tom Shoff (415) 222-8347

Field samplers' signatures: [signature]

Preservative Added: HCl, HNO3, HCl

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
0002F012		1/13/00	0807	Water	2	—	—	—	—	X	—	—	—	—	—
0002F013		↓	0950	↓	4	2	1	—	—	X	—	—	X	X	X
0002F014		↓	1110	↓	4	2	1	—	—	X	—	—	X	X	X
0002F015		↓	1215	↓	4	2	1	—	—	X	—	—	X	X	X
0002F016		↓	1313	↓	4	2	1	—	—	X	—	—	X	X	X
0002F017		↓	1450	↓	4	2	1	—	—	X	—	—	X	X	X

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	John Fortuna	R&M Environmental	1/13/00	1730
Received by: Relinquished to FedEx				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by: [signature]	Scott Lavigne	STL	1/14/00	0950

Turnaround time/remarks: Standard

FedEx Airbill # 8122 0276 9430

0855

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Chain of Custody Record

Page 1 of 1

PO#	Lab:
99-2262 Mod 1	Severn Trent

Project name:	TtEMI technical contact:	Field samplers:
Parcel B Ramp Walls	Rameen Moezi (415)222-8378	D. Posselt
Project number:	**TtEMI project manager:**	**Field samplers' signatures:**
CTO-270	Tom Shoff (415)222-8347	Daniel Posselt

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added: HCl	HNO3	HCl	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
0002P0006		1/13/00	0830	water	2								X					
0002P0003A		1/13/00	0903/0905		2												X	
0002P0003A		1/13/00	0924				1									X		
0002P0003A		1/13/00	0850/0852			2												X
0002P0003A		1/13/00	0851/0852			4								XX				
0002P0005A		1/13/00	1220		4	2							X				X	X
0002P0005A		1/13/00	1221				1									X		
0002P0007		1/13/00	1357		4	2	1						X			X	X	X
0002P0008		1/13/00	1429		4	2	1						X			X	X	X
0002P0009		1/13/00	1414		4	2	1						X			X	X	X

Daniel Posselt

	Name (print)	Company Name	Date	Time
Relinquished by: Daniel Posselt	Daniel Posselt	Rtm Environmental	1/13/00	1730
Received by: Relinquished to FedEx				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by: Scott	Scott Lavigne	STL	1/14/00	0930

Turnaround time/remarks: Standard

FedEx Airbill # 8172 0276 9430

WHITE-Laborato... YELLOW-Project Office Copy

0851

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Chain of Custody Record

Page 1 of 1

PO#	Lab: (802)
99-262 Mod 1	Severn Trent 655-1203
Project name: Parcel B Ramp wells	**TtEMI technical contact:** (415) Rameen Moezzi 222-8278
Project number: CTO-270	**TtEMI project manager:** Tom Shoff (415)222-8347
	Field samplers: J. Fortuna
	Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Preservative Added: HCl	HNO3 HCl	HCl	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	CLP Low-Rad VOA
0002F018		1/14/00	0827	Water	2								X						
0002F019			0930		4	6	1							X	X	X	X	X	X
0002F020			1010		4	6	1							X	X	X	X	X	X
0002F021			1050		4	6	1						X	X	X	X	X	X	
0002F022			1215		4	2	1						X		X	X	X		
0002F009A			1313		2	1	1								X	X	X		
0002F023			1409		4	2	1						X		X	X	X		

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R-tm Environmental	1/14/00	1630
Received by: Relinquished to FedEx				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:	Scott Lavigne	STL	1/15/00	1100

Turnaround time/remarks: Standard

FedEx Airbill # 8122 0276 9440

Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

PO#	Lab:
99-262 Mod 1	Severn Trent (802)655-1203

Project name:	TtEMI technical contact:	Field samplers:
Parcel B RAMP Wells	Ramin Moezzi (415) 222-8278	D. Posselt
Project number:	**TtEMI project manager:**	**Field samplers' signatures:**
CTO-270	Tom Shoff (415) 222-8347	Daniel Posselt

Preservative Added: HCl, HNO3, HCl

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
0002P010		1/14/00	0830	water	2					X					
0002P011		↓	0945	↓	4	2	1			X			X	X	X
0002P012	MS/MSD (same sample)	↓	1215	↓	4	2	1			X			X	X	X
0002P013	MS/MSD (same sample)	↓	1250	↓	4	2	1			X			X	X	X
0002P014		↓	1310	↓	4	2	1			X			X	X	X
0002P002A		↓	1400	↓	2	2	1						X	X	X

		Name (print)	Company Name	Date	Time
Relinquished by:	Daniel Posselt	Daniel Posselt	R and M Environmental	1/14/00	1630
Received by:	Relinquished to Fed Ex				
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					
Relinquished by:					
Received by:	Scott L	Scott Lavigne	STL	1/15/00	1100

Turnaround time/remarks: Standard
FedEx Airbill #8122 0276 9440

APPENDIX D

JANUARY 2000 DATA VALIDATION REPORTS

DATA VALIDATION REPORT

Tech Review 3/23/00 by Romeen Moaffi /T+EMI

Hunters Point Shipyard

Parcel B Ramp Wells

Prepared for

Tetra tech EMI

Severn Trent Laboratories
Laboratory Project ID
76381

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 8.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

TMETAL

Lab ID	Field ID	Sample Type	Matrix	Date Collected
405286	9950F001	Full Validation Sample	WATER	12/17/99
405286DP	9950F001D		WATER	12/17/99
405286MS	9950F001MS		WATER	12/17/99

TPHEXT

Lab ID	Field ID	Sample Type	Matrix	Date Collected
405286	9950F001	Full Validation Sample	WATER	12/17/99
405286MS	9950F001MS		WATER	12/17/99
405286MSD	9950F001MSD		WATER	12/17/99

TPHPRG

Lab ID	Field ID	Sample Type	Matrix	Date Collected
405286	9950F001	Full Validation Sample	WATER	12/17/99
405286MS	9950F001MS		WATER	12/17/99
405286MD	9950F001MSD		WATER	12/17/99

VOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
405286	9950F001	Full Validation Sample	WATER	12/17/99
405286MS	9950F001MS		WATER	12/17/99
405286MD	9950F001MSD		WATER	12/17/99
405287	9950F002	Trip Blank	WATER	12/17/99

One of four amber liters for sample 9950F001 was received at the laboratory broken. Cooler temperatures were within 2 - 6° C upon arrival at the laboratory.

3.0 CLP Volatile Organics by GC/MS

3.1 Calibrations

Due to continuing calibrations problems, the following nondetected results are qualified as estimated (UJ7):

Date Analyzed: 12/21/99

Analyte	CC %D	Q
2-BUTANONE	-51.1 ✓	J7 / UJ7
2-HEXANONE	-66 ✓	J7 / UJ7
ACETONE	-83.2 ✓	J7 / UJ7

Associated Samples: 9950F001 9950F002

[1] **According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects**

Full Validation for Sample 9950F001

3.2 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The sample was analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

Note From TICs in sample 9950F001 (POC well IR26MW41A).

4.0 TPH Extractables by GC/FID (Modified SW8015)

All cursory requirements were met by this method. ✓

Full Validation for Sample 9950F001

4.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

5.0 TPH Purgeables by GC/FID (Modified SW8015)

All cursory requirements were met by this method. ✓

Full Validation for Sample 9950F001

5.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

6.0 CLP Metals

6.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

Matrix: WATER
Prep Date: 12/27/99
Analysis Date: 12/29/99

Blank ID	Analyte	Result	DL	Units
PBW11				
	THALLIUM	3.9	2.7	UG/L
	ZINC	6.5	1.6	UG/L

Affected Samples:		Analyte	Qualified Result	DL	Units
9950F001	WATER	THALLIUM	5.5 U1	2.7	UG/L
9950F001	WATER	ZINC	9.2 U1	1.6	UG/L

According to the TtEMI Statement of Work for Hunters Point, if a target analyte is found in any blank at a level > DL, all associated results <5X the amount found shall be qualified as nondetected at the level detected (U1). If any target analytes are detected in any blank at a level > CRDL, all associated results must be > 10X the amount found in the blank or all associated batch samples should be redigested and reanalyzed.

Due to negative drift observed in laboratory blanks, the following results are considered estimated (UJ1):

Matrix: WATER
Prep Date: 12/27/99
Analysis Date: 12/27/99

Blank ID	Analyte	Result	DL	Units
CCB	CHROMIUM	-9.7	0.9	UG/L
CCB	MERCURY	-0.1	0.1	UG/L

Associated Results:		Analyte	Qualified Result	Units
9950F001	WATER	CHROMIUM	0.9 UJ1	UG/L
9950F001	WATER	MERCURY	0.1 UJ1	UG/L

According to the TtEMI Statement of Work for Hunters Point, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if negative drift >IDL is found, qualify all nondetected and detected results < 5X the value as estimated (J1UJ1).

6.2 Matrix Spikes

Due to accuracy problems in the MS analysis, the following detected result is qualified as estimated (J3):

MS BATCH ID:	PBW11	**Dil Factor:**	1
MS/MSD ID:	9950F001MS	**Prep Date:**	12/27/99
Spiked Sample:	405286MS	**Analysis Date:**	12/29/99
MATRIX:	WATER		

ANALYTE	% Recovery	Limits [1]	Q [2]
MANGANESE	73.4	75- 125	J3/UJ3

Associated samples: 9950F001

[1] Project-established Limits

[2] According to the TtEMI Statement of Work for Hunters Point, if the MS recovery is < LCL, apply J3 to all associated detects and UJ3 to all nondetects; guidelines do not apply when sample concentration exceeds the spike concentration by a factor of four or greater

(Note manganese result was also qualified for precision, which may be related.)

6.3 Matrix Duplicates

Due to precision problems in the matrix duplicate analysis, the following detected results are qualified as estimated (J2):

Analyte	Primary Sample 9950F001	Dup Sample 9950F001D	CRDL	Units	RPD	Limit [1]	Q
MAGNESIUM	124000	76000	5000	UG/L	48	20	J2
MANGANESE	1730	865	15	UG/L	67	20	J2

Associated samples: 9950F001

[1] According to the project guidelines, for water matrix, if the RPD is >20% and both sample results are >5X CRDL, flag all associated batch samples J2; if either or both sample results are <5X CRDL, the control limit shall be +/- 1X CRDL

6.4 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	Units	Q [1]
9950F001	BARIUM	1	38.5	UG/L	J
9950F001	COBALT	1	2.8	UG/L	J
9950F001	MOLYBDENUM	1	2.6	UG/L	J
9950F001	NICKEL	1	36.5	UG/L	J
9950F001	POTASSIUM	1	1340	UG/L	J
9950F001	VANADIUM	1	9.9	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

Full Validation for Sample 9950F001

6.5 Analyte Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

7.0 Overall Assessment of Data

Usability

Due to calibration problems in the volatiles analyses, nondetected 2-butanone, 2-hexanone and acetone results for two samples are qualified as estimated.

Due to laboratory blank contamination in the metals analyses, detected thallium and zinc results for one sample are qualified as nondetect. Due to laboratory blank negative drift, nondetected chromium and mercury results for one sample are qualified as estimated. Due to poor matrix spike accuracy, detected manganese results for one sample are qualified as estimated. Due to poor sample duplicate precision, detected magnesium and manganese results for one sample are qualified as estimated.

The quality control reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the absence of rejected data and the small number of qualifiers added to the data indicate high usability.

8.0 References

"Data Validation Guidelines for CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for Non-CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Organic Data Review" (February 1994)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

76381

Data Quality Summary

Sample Delivery Group

76381

VOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**70**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**6**	8.6%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
UJ7 - compound is estimated due to cal. exceedance	6	8.6%	100.0%	N

Data Quality Summary

Sample Delivery Group

76381

TPHEXT

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**2**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**0**	0.0%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

Data Quality Summary

Sample Delivery Group

76381

TPHPRG

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**1**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**0**	0.0%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

Data Quality Summary

Sample Delivery Group

76381

TMETAL

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**24**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**12**	50.0%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Analyte is nondetected due to laboratory blank contamination	2	8.3%	16.7%	H
J23 - Multiple Reasons	1	4.2%	8.3%	L
UJ1 - Analyte is estimated due to negative drift	2	8.3%	16.7%	L
J - Result is > the MDL but < the PQL	6	25.0%	50.0%	N
J2 - Analyte is estimated due to laboratory duplicate precision exceedance	1	4.2%	8.3%	N

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/23/00 by Romea Mogyi/TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Severn Trent Laboratories
Laboratory Project ID
76600

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 11.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

DMETAL

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407063	0002F002F		WATER	1/11/00
407065	0002F003F		WATER	1/11/00
407067	0002F004F		WATER	1/11/00
407069	0002F005F	Equipment Rinsate Blank	WATER	1/11/00

LVOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407170	0002F009		WATER	1/12/00
407171	0002F010	Full Validation Sample	WATER	1/12/00
407176	0002P004		WATER	1/12/00
407321	0002P005		WATER	1/13/00

PEST

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407320	0002P003A	Full Validation Sample	WATER	1/13/00

SVOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407320	0002P003A	Full Validation Sample	WATER	1/13/00

TMETAL

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407062	0002F002		WATER	1/11/00
407064	0002F003		WATER	1/11/00
407066	0002F004		WATER	1/11/00
407068	0002F005	Equipment Rinsate Blank	WATER	1/11/00
407168	0002F007		WATER	1/12/00
407168DP	0002F007D		WATER	1/12/00
407168MS	0002F007MS		WATER	1/12/00
407169	0002F008		WATER	1/12/00
407171	0002F010	Full Validation Sample	WATER	1/12/00
407172	0002F011	Equipment Rinsate Blank	WATER	1/12/00
407326	0002F013		WATER	1/13/00
407320	0002P003A	Full Validation Sample	WATER	1/13/00
407321	0002P005		WATER	1/13/00
407322	0002P007		WATER	1/13/00
407323	0002P008	Dup of 0002P007	WATER	1/13/00
407324	0002P009	Full Validation Sample	WATER	1/13/00

TPHEXT

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407062R1	0002F002		WATER	1/11/00
407064R1	0002F003		WATER	1/11/00
407066R1	0002F004		WATER	1/11/00
407068R1	0002F005	Equipment Rinsate Blank	WATER	1/11/00
407168	0002F007		WATER	1/12/00
407168MS	0002F007MS		WATER	1/12/00
407168MD	0002F007MSD		WATER	1/12/00
407169	0002F008		WATER	1/12/00
407171	0002F010	Full Validation Sample	WATER	1/12/00
407172	0002F011	Equipment Rinsate Blank	WATER	1/12/00
407326	0002F013		WATER	1/13/00
407320	0002P003A	Full Validation Sample	WATER	1/13/00
407321	0002P005		WATER	1/13/00
407322	0002P007		WATER	1/13/00
407323	0002P008	Dup of 0002P007	WATER	1/13/00
407324	0002P009	Full Validation Sample	WATER	1/13/00

TPHPRG

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407062	0002F002		WATER	1/11/00
407062R1	0002F002RE		WATER	1/11/00
407064	0002F003		WATER	1/11/00
407066	0002F004		WATER	1/11/00
407068	0002F005	Equipment Rinsate Blank	WATER	1/11/00
407168	0002F007		WATER	1/12/00
407168MS	0002F007MS		WATER	1/12/00
407168MD	0002F007MSD		WATER	1/12/00
407169	0002F008		WATER	1/12/00
407171	0002F010	Full Validation Sample	WATER	1/12/00
407172	0002F011	Equipment Rinsate Blank	WATER	1/12/00
407326	0002F013		WATER	1/13/00
407320	0002P003A	Full Validation Sample	WATER	1/13/00
407321	0002P005		WATER	1/13/00
407322	0002P007		WATER	1/13/00
407323	0002P008	Dup of 0002P007	WATER	1/13/00
407324	0002P009	Full Validation Sample	WATER	1/13/00

VOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407061	0002F001	Trip Blank	WATER	1/11/00
407062	0002F002		WATER	1/11/00
407064	0002F003		WATER	1/11/00
407066	0002F004		WATER	1/11/00
407068	0002F005	Equipment Rinsate Blank	WATER	1/11/00
407167	0002F006	Trip Blank	WATER	1/12/00
407168	0002F007		WATER	1/12/00
407168MS	0002F007MS		WATER	1/12/00
407168MSD	0002F007MSD		WATER	1/12/00
407169	0002F008		WATER	1/12/00
407172	0002F011	Equipment Rinsate Blank	WATER	1/12/00
407325	0002F012	Trip Blank	WATER	1/13/00
407326	0002F013		WATER	1/13/00
407173	0002P001	Trip Blank	WATER	1/12/00
407174	0002P002		WATER	1/12/00
407175	0002P003	Full Validation Sample	WATER	1/12/00
407319	0002P006	Trip Blank	WATER	1/13/00
407322	0002P007		WATER	1/13/00
407323	0002P008	Dup of 0002P007	WATER	1/13/00
407324	0002P009	Full Validation Sample	WATER	1/13/00

All samples were received intact and properly labeled. Cooler temperatures were within 2 - 6° C upon arrival at the laboratory.

3.0 CLP Low Level Volatile Organics by GC/MS

3.1 Laboratory Control Samples

Due to a problem in the LCS analysis, the nondetected result for the following associated sample is qualified as estimated (UJ3):

LCS ID: 0.5PPBLCS
BATCH ID: VBLKK9
MATRIX: WATER
PREP DATE:

Analyte	% Recovery LCS	Limits [1]	Q [2]
CARBON TETRACHLORIDE	68	75 - 125	J3/UJ3

Associated samples: 0002P005

[1] Project-Established Limits

[2] According to the TtEMI Statement of Work, if the LCS recovery is less than the lower control limit, apply J3 to all associated detects and UJ3 to nondetects

Detected results for the listed compound may be biased low, and a false nondetect may have been reported.

3.2 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0002F009	CIS-1,2-DICHLOROETHENE	1.9	0.6	2	UG/L	J
0002P004	TRANS-1,2-DICHLOROETHENE	1	0.3	1	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

Full Validation for Sample 0002F010

3.3 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The sample was analyzed within 12 hours of the associated performance check.

3.3 Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. No TICs were identified.

System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

4.0 CLP Volatile Organics by GC/MS

4.1 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4);

Matrix: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0002F005	ACETONE	4	10 U4	UG/L

According to the TtEMI Statement of Work for Hunters Point, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

Blanks

Due to field or equipment blank contamination, the following results are considered nondetected (U2):

Blank ID: 0002F012 Trip Blank
Collection Date: 1/13/00

Analyte	Result	RL	Units
CHLOROFORM	1 J	10	UG/L

Associated Results:			Reported Result	Qualified Result	
0002P009	WATER	CHLOROFORM	3	10 U2	UG/L

Blank ID: 0002P001 Trip Blank
Collection Date: 1/12/00

Analyte	Result	RL	Units
CHLOROFORM	5 J	10	UG/L

Associated Results:			Reported Result	Qualified Result	
0002F008	WATER	CHLOROFORM	8	10 U2	UG/L

[1] According to the TtEMI Statement of Work for Hunters Point, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if the concentration detected in an associated sample is at a level < RL, the value shall be elevated to the RL (U2); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U2).

4.2 Calibrations

Due to continuing calibrations problems, the following nondetected results are qualified as estimated (UJ7):

Date Analyzed: 1/20/00

Analyte	CC %D	Q
2-BUTANONE	35.5	J7 / UJ7
2-HEXANONE	37	J7 / UJ7
ACETONE	43.8	J7 / UJ7

Associated Samples: 0002P008

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

4.3 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0002F005	CHLOROFORM	1	6	10	UG/L	J
0002F012	CHLOROFORM	1	1	10	UG/L	J
0002P001	CHLOROFORM	1	5	10	UG/L	J
0002P003	1,2-DICHLOROETHANE	1	2	10	UG/L	J
0002P006	TERT-BUTYL METHYL ETHER	1	1	5	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

4.4 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for all target analytes.

Full Validation for Samples 0002P003 and 0002P009

4.5 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

Full Validation for Samples 0002P003 and 0002P009

4.5 Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

System Performance

The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

5.0 CLP Semivolatile Organic Compounds by GC/MS

5.1 Calibrations

Due to initial calibrations problems, the following nondetected result is qualified as estimated (UJ7):

ICAL Date:

Analyte	ICAL RSD	Q
2,4-DINITROPHENOL	34.2	J7 / UJ7

Associated Samples: 0002P003A

1 According to the TtEMI Statement of Work, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

Calibrations

Due to continuing calibrations problems, the following nondetected results are qualified as estimated (UJ7):

Date Analyzed: 1/24/00

Analyte	CC %D	Q
2,4-DICHLOROPHENOL	25.1	J7 / UJ7
2,4-DIMETHYLPHENOL	31.5	J7 / UJ7
4,6-DINITRO-2-METHYLPHENOL	28.5	J7 / UJ7
4-CHLOROANILINE	26	J7 / UJ7

Associated Samples: 0002P003A

1 According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

5.2 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0002P003A						
	2-METHYLNAPHTHALENE	1.4	6	14	UG/L	J
	ANTHRACENE	1.4	7	14	UG/L	J
	CARBAZOLE	1.4	5	14	UG/L	J
	DIBENZOFURAN	1.4	12	14	UG/L	J
	FLUORENE	1.4	12	14	UG/L	J
	PHENANTHRENE	1.4	2	14	UG/L	J
	PYRENE	1.4	8	14	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

Full Validation for Sample 0002P003A

5.3 GC/MS Tuning

The ion abundance criteria were met for the decafluorotriphenylphosphine (DFTPP) GC/MS performance checks. The sample was analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits. All reported results reflect any dilutions and volumes.

Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

6.0 CLP Organochlorine Pesticides/PCBs by GC/ECD

6.1 Surrogate Recovery

Due to surrogate recovery problems, nondetected results for the following sample are qualified as estimated (UJ3):

Sample ID	DF	Surrogate	% Rec	Q
0002P003A	1	TCMX	24, 17	J3 / UJ3
		DCB	14, 10	J3 / UJ3

According to the Statement of Work for Hunters Point, if two or more surrogate recoveries are > 10% and below the LCL, flag detected and nondetected results J3/UJ3

Full Validation for Sample 0002P003A

6.3 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

6.2 Compound Identification

Due to compound identification problems, the following detected result is qualified as ~~estimated nondetected (UJ9)~~: nondetected (U9):

- alpha-chlordane in sample 0002P003ARE

The %D between the two columns was >50%, and the reported result was less than ~~the~~ the repot limit. The validated result is nondetected at the repot limit, 0.01 U9. considered to be

7.0 TPH Extractables by GC/FID (Modified SW8015)

All cursory requirements were met by this method. ✓

7.1 Field Duplicates

One set of field duplicates was collected for analysis by this method. The following results were found:

	Primary Sample		*Dup Sample*			
	0002P007		0002P008			
Analyte	**Result**	**RL**	**Result**	**RL**	**Units**	**RPD**
DIESEL FUEL	0.1 U	0.1	0.1 U	0.1	MG/L	NC
MOTOR OIL	0.2 MZ	0.1	0.3MH	0.1	MG/L	40

Sample results are not qualified on the basis of field duplicate precision.

Full Validation for Samples 0002F010, 0002P003A and 0002P009

7.2 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

8.0 TPH Purgeables by GC/FID (Modified SW8015)

8.1 Surrogate Recovery

Due to surrogate recovery problems, nondetected results for the following samples are qualified as estimated (UJ3):

Lab ID	Client ID	Matrix	DF	Analyte	% Rec	Limits [1]	Q
407062	0002F002	WATER	1	BROMOFLUOROBENZENE	65 ✓	75- 125	J3/UJ3
407062R	0002F002RE	WATER	1	BROMOFLUOROBENZENE	58 ✓	75- 125	J3/UJ3

[1] Project-established Limits

[1] According to the Statement of Work for Hunters Point, if any surrogate recovery is > 10% and below the LCL, flag detected/nondetected results J3/UJ3; if the dilution factor is > 5, no action is taken

8.2 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for gasoline.

Full Validation for Samples 0002F010, 0002P003A and 0002P009

8.3 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

9.0 CLP Total and Dissolved Metals by ICP/CVAA

9.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

Matrix: WATER
Prep Date: 1/19/00

Blank ID	Analyte	Result	DL	Units
CCB	ALUMINUM	171.2	15.5	UG/L
ICB	ARSENIC	2.8	2.5	UG/L
ICB	BERYLLIUM	0.3	0.1	UG/L
PBW11	MANGANESE	1.3	0.6	UG/L
PBW21	MERCURY	0.13	0.1	UG/L
PBW11	ZINC	5.8	1.9	UG/L

Affected Samples:			Qualified Result		
0002F004	WATER	ALUMINUM	781	U1	UG/L
0002F004F	WATER	ALUMINUM	30.2	U1	UG/L
0002F008	WATER	ALUMINUM	24.2	U1	UG/L
0002F011	WATER	ALUMINUM	24.8	U1	UG/L
0002F013	WATER	ALUMINUM	48.5	U1	UG/L
0002F002	WATER	ARSENIC	2.7	U1	UG/L
0002F003F	WATER	ARSENIC	3.2	U1	UG/L
0002F004	WATER	ARSENIC	5.8	U1	UG/L
0002P003A	WATER	ARSENIC	5.3	U1	UG/L
0002P005	WATER	ARSENIC	3.3	U1	UG/L
0002F002	WATER	BERYLLIUM	0.18	U1	UG/L
0002F002F	WATER	BERYLLIUM	0.21	U1	UG/L
0002F004F	WATER	BERYLLIUM	0.11	U1	UG/L
0002P003A	WATER	BERYLLIUM	0.25	U1	UG/L
0002P007	WATER	BERYLLIUM	0.16	U1	UG/L
0002P008	WATER	BERYLLIUM	0.23	U1	UG/L
0002P009	WATER	BERYLLIUM	0.11	U1	UG/L
0002F013	WATER	BERYLLIUM	0.18	U1	UG/L
0002F011	WATER	MANGANESE	0.88	U1	UG/L
0002F003F	WATER	MERCURY	0.12	U1	UG/L
0002F004	WATER	MERCURY	0.13	U1	UG/L
0002F004F	WATER	MERCURY	0.15	U1	UG/L
0002F011	WATER	MERCURY	0.11	U1	UG/L
0002P003A	WATER	MERCURY	0.11	U1	UG/L
0002P007	WATER	MERCURY	0.12	U1	UG/L
0002F003	WATER	ZINC	3.9	U1	UG/L
0002F007	WATER	ZINC	11	U1	UG/L
0002F011	WATER	ZINC	3.4	U1	UG/L

9.1 Blanks (cont.)

Matrix: WATER
Analysis Date: 2/2/00

Blank ID	Analyte	Result	DL	Units
ICB	CADMIUM	0.6	0.2	UG/L
CCB	CALCIUM	166.2	151	UG/L
ICB	CHROMIUM	2.2	1	UG/L
ICB	COBALT	1.5	1.3	UG/L

Affected Samples:			Qualified Result		
0002F010	WATER	CADMIUM	0.39	U1	UG/L
0002P009	WATER	CADMIUM	0.88	U1	UG/L
0002P008	WATER	CADMIUM	0.71	U1	UG/L
0002F002F	WATER	CADMIUM	1.6	U1	UG/L
0002P007	WATER	CADMIUM	0.35	U1	UG/L
0002F013	WATER	CADMIUM	0.66	U1	UG/L
0002F004F	WATER	CADMIUM	0.99	U1	UG/L
0002F002	WATER	CADMIUM	1.3	U1	UG/L
0002F011	WATER	CALCIUM	168	U1	UG/L
0002F002	WATER	CHROMIUM	5.9	U1	UG/L
0002F002F	WATER	CHROMIUM	5.6	U1	UG/L
0002F003	WATER	CHROMIUM	5.3	U1	UG/L
0002F003F	WATER	CHROMIUM	6.5	U1	UG/L
0002F004	WATER	CHROMIUM	6.5	U1	UG/L
0002F004F	WATER	CHROMIUM	4.5	U1	UG/L
0002F008	WATER	CHROMIUM	6.4	U1	UG/L
0002F010	WATER	CHROMIUM	1.8	U1	UG/L
0002F013	WATER	CHROMIUM	4.1	U1	UG/L
0002F004F	WATER	COBALT	3.8	U1	UG/L
0002P009	WATER	COBALT	1.4	U1	UG/L
0002F010	WATER	COBALT	1.5	U1	UG/L
0002F002F	WATER	COBALT	1.6	U1	UG/L
0002F013	WATER	COBALT	6.1	U1	UG/L
0002P007	WATER	COBALT	3.6	U1	UG/L
0002P008	WATER	COBALT	4.4	U1	UG/L
0002F008	WATER	COBALT	1.4	U1	UG/L

9.1 Blanks (cont.)

Matrix: WATER
Analysis Date: 2/2/00

Blank ID	Analyte	Result	DL	Units
CCB	MOLYBDENUM	1.2	0.9	UG/L
ICB	THALLIUM	5.8	3.2	UG/L

Affected Samples:			Qualified Result		
0002F008	WATER	MOLYBDENUM	3.6	U1	UG/L
0002F002F	WATER	MOLYBDENUM	5.3	U1	UG/L
0002P005	WATER	MOLYBDENUM	2.8	U1	UG/L
0002F003F	WATER	MOLYBDENUM	2	U1	UG/L
0002F013	WATER	MOLYBDENUM	2.3	U1	UG/L
0002F011	WATER	MOLYBDENUM	1.6	U1	UG/L
0002F004	WATER	MOLYBDENUM	4.7	U1	UG/L
0002F007	WATER	MOLYBDENUM	2.3	U1	UG/L
0002F002F	WATER	THALLIUM	12.4	U1	UG/L
0002F004F	WATER	THALLIUM	6.3	U1	UG/L
0002F002	WATER	THALLIUM	12.4	U1	UG/L
0002F010	WATER	THALLIUM	6.2	U1	UG/L
0002P009	WATER	THALLIUM	6.7	U1	UG/L
0002P003A	WATER	THALLIUM	4.7	U1	UG/L
0002P007	WATER	THALLIUM	12.5	U1	UG/L
0002P008	WATER	THALLIUM	7.5	U1	UG/L
0002F008	WATER	THALLIUM	4.9	U1	UG/L

9.1 Blanks (cont.)

Due to negative drift observed in laboratory blanks, the following results are considered estimated (UJ1):

Matrix: WATER
Prep Date: 1/19/00
Analysis Date: 1/19/00

Blank ID	Analyte	Result	DL	Units
PBW11	COPPER	-12	1.6	UG/L
PBW11	IRON	-24	14.8	UG/L
CCB	POTASSIUM	-1292	169	UG/L
PBW11	SILVER	-4.5	1	UG/L

Associated Results:			Qualified Result		Units
0002F004	WATER	COPPER	32.8	J1	UG/L
0002F002	WATER	COPPER	1.6	UJ1	UG/L
0002F008	WATER	COPPER	1.6	UJ1	UG/L
0002F005F	WATER	COPPER	1.6	UJ1	UG/L
0002F010	WATER	COPPER	6.5	J1	UG/L
0002F011	WATER	COPPER	1.6	UJ1	UG/L
0002F005	WATER	COPPER	1.6	UJ1	UG/L
0002F007	WATER	COPPER	1.6	UJ1	UG/L
0002F004F	WATER	COPPER	19.1	J1	UG/L
0002P003A	WATER	COPPER	1.6	UJ1	UG/L
0002P007	WATER	COPPER	10.5	J1	UG/L
0002P005	WATER	COPPER	1.6	UJ1	UG/L
0002P009	WATER	COPPER	2	J1	UG/L
0002F003F	WATER	COPPER	1.6	UJ1	UG/L
0002F002F	WATER	COPPER	8.4	J1	UG/L
0002P008	WATER	COPPER	7.1	J1	UG/L
0002F003	WATER	COPPER	1.6	UJ1	UG/L
0002F013	WATER	COPPER	1.6	UJ1	UG/L
0002F005F	WATER	IRON	14.8	UJ1	UG/L
0002F011	WATER	IRON	14.8	UJ1	UG/L
0002F003F	WATER	IRON	64.5	J1	UG/L
0002F005	WATER	IRON	14.8	UJ1	UG/L
0002F003	WATER	IRON	18	J1	UG/L
0002P005	WATER	IRON	14.8	UJ1	UG/L
0002F007	WATER	IRON	75.7	J1	UG/L
0002F005F	WATER	POTASSIUM	169	UJ1	UG/L
0002F005	WATER	POTASSIUM	169	UJ1	UG/L
0002F007	WATER	POTASSIUM	3820	J1	UG/L
0002F011	WATER	POTASSIUM	169	UJ1	UG/L
0002F013	WATER	POTASSIUM	3360	J1	UG/L
0002P005	WATER	POTASSIUM	5160	J1	UG/L
0002F004	WATER	SILVER	1	UJ1	UG/L
0002F002	WATER	SILVER	1	UJ1	UG/L
0002P008	WATER	SILVER	1	UJ1	UG/L
0002F002F	WATER	SILVER	3.5	J1	UG/L

Associated Results:			Qualified Result		Units
0002P007	WATER	SILVER	3.1	J1	UG/L
0002P005	WATER	SILVER	1	UJ1	UG/L
0002F003	WATER	SILVER	1	UJ1	UG/L
0002P003A	WATER	SILVER	1	UJ1	UG/L
0002F007	WATER	SILVER	1	UJ1	UG/L
0002F013	WATER	SILVER	1	UJ1	UG/L
0002F005F	WATER	SILVER	1	UJ1	UG/L
0002F004F	WATER	SILVER	3.4	J1	UG/L
0002F011	WATER	SILVER	1	UJ1	UG/L
0002F010	WATER	SILVER	3.2	J1	UG/L
0002F005	WATER	SILVER	1	UJ1	UG/L
0002F008	WATER	SILVER	1	UJ1	UG/L
0002P009	WATER	SILVER	1	UJ1	UG/L
0002F003F	WATER	SILVER	1	UJ1	UG/L

9.1 Blanks (cont.)

Matrix: WATER
Prep Date: 1/19/00
Analysis Date: 1/19/00

Blank ID	Analyte	Result	DL	Units
CCB	ANTIMONY	-2.6	2.2	UG/L
CCB	SELENIUM	-3.8	2.5	UG/L
CCB	SODIUM	-3222	289	UG/L
	Magnesium	-764		ug/L

Associated Results:			Qualified Result		Units
0002F008	WATER	ANTIMONY	7.2	J1	UG/L
0002F002F	WATER	ANTIMONY	5	J1	UG/L
0002F003	WATER	ANTIMONY	2.2	UJ1	UG/L
0002F003F	WATER	ANTIMONY	5.4	J1	UG/L
0002F004	WATER	ANTIMONY	2.2	UJ1	UG/L
0002F004F	WATER	ANTIMONY	6.2	J1	UG/L
0002F005	WATER	ANTIMONY	2.2	UJ1	UG/L
0002F005F	WATER	ANTIMONY	2.2	UJ1	UG/L
0002F002	WATER	ANTIMONY	2.2	UJ1	UG/L
0002F007	WATER	ANTIMONY	2.2	UJ1	UG/L
0002F010	WATER	ANTIMONY	3.8	J1	UG/L
0002F011	WATER	ANTIMONY	2.2	UJ1	UG/L
0002F013	WATER	ANTIMONY	5.2	J1	UG/L
0002P009	WATER	ANTIMONY	5.4	J1	UG/L
0002P003A	WATER	ANTIMONY	4.9	J1	UG/L
0002P008	WATER	ANTIMONY	10.7	J1	UG/L
0002P005	WATER	ANTIMONY	3.9	J1	UG/L
0002P007	WATER	ANTIMONY	11.8	J1	UG/L
0002F005	WATER	SELENIUM	2.5	UJ1	UG/L
0002F002	WATER	SELENIUM	2.5	UJ1	UG/L
0002F002F	WATER	SELENIUM	2.5	UJ1	UG/L
0002P008	WATER	SELENIUM	2.5	UJ1	UG/L
0002F003	WATER	SELENIUM	2.5	UJ1	UG/L
0002F003F	WATER	SELENIUM	2.5	UJ1	UG/L
0002P007	WATER	SELENIUM	2.5	UJ1	UG/L
0002F004	WATER	SELENIUM	2.5	UJ1	UG/L
0002F004F	WATER	SELENIUM	2.5	UJ1	UG/L
0002F007	WATER	SELENIUM	2.5	UJ1	UG/L
0002P005	WATER	SELENIUM	2.5	UJ1	UG/L
0002F005F	WATER	SELENIUM	2.5	UJ1	UG/L
0002P003A	WATER	SELENIUM	2.5	UJ1	UG/L
0002P009	WATER	SELENIUM	2.5	UJ1	UG/L
0002F008	WATER	SELENIUM	2.5	UJ1	UG/L
0002F013	WATER	SELENIUM	2.5	UJ1	UG/L
0002F010	WATER	SELENIUM	2.5	UJ1	UG/L
0002F011	WATER	SELENIUM	2.5	UJ1	UG/L
0002F011	WATER	SODIUM	289	UJ1	UG/L

Associated Results:			Qualified Result		Units
0002F005F	WATER	SODIUM	414	UJ1	UG/L
0002F005	WATER	SODIUM	1230	UJ1	UG/L

According to the TtEMI Statement of Work for Hunters Point, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if negative drift >IDL is found, qualify all nondetected and detected results < 5X the value as estimated (J1/UJ1).

9.2 Matrix Spikes

Due to accuracy problems in the MS analysis, the following detected and nondetected results are qualified as estimated (J3/UJ3):

MS Batch ID:	PBW11	**Dil Factor:**	1
MS/MSD ID:	0002F007MS	**Prep Date:**	1/19/00
Spiked Sample:	407168MS	**Analysis Date:**	2/2/00
Matrix:	WATER		

Analyte	% Recovery	Limits [1]	Q [2]
SELENIUM	74.4	75- 125	J3/UJ3

Associated samples:

0002F002	0002F002F	0002F003
0002F003F	0002F004	0002F004F
0002F005	0002F005F	0002F007
0002F008	0002F010	0002F011
0002P003A	0002P005	0002P007
0002P008	0002P009	0002F013

1 Project-established Limits

2 According to the Statement of Work for Hunters Point, if the MS or MSD recovery is < LCL, flag detected results for that analyte J3 and flag nondetects UJ3; for metals, qualifiers apply to all batch samples

9.3 ICP Serial Dilution

Due to ICP serial dilution problems, detected results in the following associated samples are qualified as estimated (J4):

Prep Batch ID: PBW11
Prep Date: 1/19/00

SD Sample	Analyte	Sample Value (µg/L)	50X IDL	SD %D	Q [1]
0002F007	SODIUM	128000	14450	142	J4

Associated Samples:

0002F002	0002F002F	0002F003
0002F003F	0002F004	0002F004F
0002F005	0002F005F	0002F007
0002F008	0002F010	0002F011
0002P003A	0002P005	0002P007
0002P008	0002P009	0002F013

[1] According to the TtEMI Statement of Work, if the %D for any analyte is >10%, and the original sample result is > 50X the IDL, flag results J4 (only applies to detects)

9.4 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	Units	Q [1]
0002F002	BARIUM	1	116	UG/L	J
0002F002	MOLYBDENUM	1	7.5	UG/L	J
0002F002	NICKEL	1	26.1	UG/L	J
0002F002	VANADIUM	1	2.5	UG/L	J
0002F003	BARIUM	1	85.1	UG/L	J
0002F003	NICKEL	1	6.4	UG/L	J
0002F004	BARIUM	1	49.6	UG/L	J
0002F004	NICKEL	1	10.9	UG/L	J
0002F004	VANADIUM	1	5	UG/L	J
0002F007	BARIUM	1	168	UG/L	J
0002F007	NICKEL	1	2.9	UG/L	J
0002F008	NICKEL	1	21.3	UG/L	J
0002F008	VANADIUM	1	6.4	UG/L	J
0002F010	MOLYBDENUM	1	9.8	UG/L	J
0002F010	NICKEL	1	14	UG/L	J
0002F010	VANADIUM	1	4.6	UG/L	J
0002F013	NICKEL	1	17.9	UG/L	J
0002F013	VANADIUM	1	6	UG/L	J
0002P003A	MOLYBDENUM	1	8	UG/L	J
0002P005	NICKEL	1	7.5	UG/L	J
0002P005	VANADIUM	1	3.8	UG/L	J
0002P007	MOLYBDENUM	1	7.9	UG/L	J
0002P008	MOLYBDENUM	1	6.4	UG/L	J
0002P009	MOLYBDENUM	1	9.8	UG/L	J
0002P009	NICKEL	1	36.2	UG/L	J
0002P009	VANADIUM	1	4.4	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

9.5 Field Duplicates

One set of field duplicates was collected for analysis by this method. The following results were found:

	Primary Sample			*Dup Sample*				
	0002P007			0002P008				
Analyte	**Result**		**DL**	**Result**		**DL**	**Units**	**RPD**
ALUMINUM	15.5	U	15.5	15.5	U	15.5	UG/L	NC
ANTIMONY	11.8	B	2.2	10.7	B	2.2	UG/L	10
ARSENIC	2.5	U	2.5	2.5	U	2.5	UG/L	NC
BARIUM	459		7.6	456		7.6	UG/L	1
BERYLLIUM	0.16	B	0.1	0.23	B	0.1	UG/L	36
CADMIUM	0.35	B	0.2	0.71	B	0.2	UG/L	68
CALCIUM	440000		151	432000		151	UG/L	2
CHROMIUM	1	U	1	1	U	1	UG/L	NC
COBALT	3.6	B	1.3	4.4	B	1.3	UG/L	20
COPPER	10.5	B	1.6	7.1	B	1.6	UG/L	39
IRON	856		14.8	641		14.8	UG/L	29
LEAD	1.3	U	1.3	1.3	U	1.3	UG/L	NC
MAGNESIUM	695000		327	688000		327	UG/L	1
MANGANESE	835		0.6	820		0.6	UG/L	2
MERCURY	0.12	B	0.1	0.1	U	0.1	UG/L	18
MOLYBDENUM	7.9	B	0.9	6.4	B	0.9	UG/L	21
NICKEL	48.9		1.7	49.6		1.7	UG/L	1
POTASSIUM	225000		4530	191000		4530	UG/L	16
SELENIUM	2.5	UN	2.5	2.5	UN	2.5	UG/L	0
SILVER	3.1	B	1	1	U	1	UG/L	102
SODIUM	4610000	E	28900	4910000	E	28900	UG/L	6
THALLIUM	12.5		3.2	7.5	B	3.2	UG/L	50
VANADIUM	1.8	U	1.8	1.8	U	1.8	UG/L	NC
ZINC	110		1.9	112		1.9	UG/L	2

Sample results are not qualified on the basis of field duplicate precision.

Full Validation for Samples 0002F010, 0002P003A and 0002P009

9.9 Analyte Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

10.0 Overall Assessment of Data

Method Compliance and Additional Comments

For the pesticide analysis, sample 0002P003A was originally analyzed after sulfur cleanup. The sample exhibited low surrogate recoveries. The laboratory reanalyzed the sample; surrogate recoveries were acceptable, however, the laboratory failed to perform sulfur cleanup on the reanalysis. Sulfur interference was present in the reanalysis, therefore reporting limits from the original analysis should be used as the final validated results.

Notes: The lab had thought that the low recoveries in the original analysis were due to a bad autosampler injection; however ETHIX thought the analytes were probably lost during the sulfur cleanup.

Usability

Due to low laboratory control sample recovery in the low level volatiles analyses, the nondetected carbon tetratchloride result for one sample is qualified as estimated.

The lab submitted a revised Form I for the reanalysis, since they had not adjusted the report limits for the concentrated extract.

Due to common laboratory contamination in the volatiles analyses, the detected acetone result for one sample is qualified as nondetect. Due to field blank contamination, chloroform results for two samples are qualified as nondetect. Due to calibration problems, nondetected 2-butanone, 2-hexanone and acetone results for one sample are qualified as estimated.

Due to calibration problems in the semivolatiles analyses, nondetected 2,4-dinitrophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol and 4-chloroaniline results for one sample are qualified as estimated.

Due to low surrogate recovery in the pesticide analyses, all results for one sample are qualified as estimated.

Due to low surrogate recovery in the TPH-purgeables analyses, gasoline results for one sample and reanalysis are qualified as estimated.

Due to low matrix spike recovery in the metal analyses, selenium results for eighteen samples are qualified as estimated. Due to serial dilution precision exceedance, sodium results for eighteen samples are qualified as estimated. Due to laboratory blank contamination, aluminum and arsenic results for five samples, beryllium, cadmium, cobalt and molybdenum results for eight samples, chromium and thallium results for nine samples, calcium and manganese results for one sample, mercury results for six samples and zinc results for three samples are qualified as nondetect. Due to laboratory blank negative drift, antimony, copper, selenium and silver results for eighteen samples, iron results for seven samples, magnesium and sodium results for three samples and potassium results for six samples are qualified as estimated.

For the TPH-purgeables analyses, sample 0002F002 exhibited low surrogate recovery; reanalysis yielded lower surrogate recoveries. Results from the original analysis should be used as the final validated results.

The quality control reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the absence of rejected data and the small number of qualifiers added to the data indicate high usability.

11.0 References

"Data Validation Guidelines for CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for Non-CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Organic Data Review" (February 1994)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

76600

Data Quality Summary

Sample Delivery Group

76600

LVOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**168**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**3**	1.8%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
UJ3 - Compound is estimated due to surr/LCS exceedance	1	0.6%	33.3%	L
J - Result is > the MDL but < the PQL	2	1.2%	66.7%	N

Data Quality Summary

Sample Delivery Group

76600

VOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**612**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**11**	1.8%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U2 - Compound is ND due to field blank contamination	2	0.3%	18.2%	H
U4 - Compound is ND due to common lab contamination	1	0.2%	9.1%	H
J - Result is > the MDL but < the PQL	5	0.8%	45.5%	N
UJ7 - compound is estimated due to cal. exceedance	3	0.5%	27.3%	N

Data Quality Summary

Sample Delivery Group

76600

SVOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	64	-	-	-
TOTAL QUALIFIED DATA POINTS:	12	18.8%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
J - Result is > the MDL but < the PQL	7	10.9%	58.3%	N
UJ7 - Compound is estimated due to cal. exceedance	5	7.8%	41.7%	N

Data Quality Summary

Sample Delivery Group

76600

PEST

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	28	-	-	-
TOTAL QUALIFIED DATA POINTS:	1	3.6%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

Data Quality Summary

Sample Delivery Group

TPHEXT

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	28	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

Data Quality Summary

Sample Delivery Group

76600

TPHPRG

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**15**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**2**	13.3%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
UJ3 - Compound is estimated due to surr/LCS exceedance	2	13.3%	100.0%	L

Data Quality Summary

Sample Delivery Group

76600

TMETAL

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**336**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**162**	48.2%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Analyte is nondetected due to laboratory blank contamination	54	16.1%	33.3%	H
J1 - Analyte is estimated due to negative drift	21	6.3%	13.0%	L
J14 - Multiple Reasons	1	0.3%	0.6%	L
UJ1 - Analyte is estimated due to negative drift	34	10.1%	21.0%	L
UJ13 - Multiple Reasons	14	4.2%	8.6%	L
J - Result is > the MDL but < the PQL	26	7.7%	16.0%	N
J4 - Analyte is estimated due to serial dilution exceedance	12	3.6%	7.4%	N

Data Quality Summary

Sample Delivery Group

76600

DMETAL

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**96**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**47**	49.0%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Analyte is nondetected due to laboratory blank contamination	17	17.7%	36.2%	H
J1 - Analyte is estimated due to negative drift	9	9.4%	19.1%	L
J14 - Multiple Reasons	1	1.0%	2.1%	L
UJ1 - Analyte is estimated due to negative drift	7	7.3%	14.9%	L
UJ13 - Multiple Reasons	4	4.2%	8.5%	L
J - Result is > the MDL but < the PQL	6	6.3%	12.8%	N
J4 - Analyte is estimated due to serial dilution exceedance	3	3.1%	6.4%	N

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/27/00 by Ramon Moggi / TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Severn Trent Laboratories
Laboratory Project ID
76626

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 10.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

PEST

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407439	0002F019	Full Validation Sample	WATER	1/14/00
407440	0002F020	Dup of 0002F019	WATER	1/14/00
407440MS	0002F020MS		WATER	1/14/00
407440MD	0002F020MSD		WATER	1/14/00
407441	0002F021		WATER	1/14/00

SVOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407439	0002F019	Full Validation Sample	WATER	1/14/00
407440	0002F020	Dup of 0002F019	WATER	1/14/00
407441	0002F021		WATER	1/14/00

TMETAL

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407443	0002F009A		WATER	1/14/00
407328	0002F014		WATER	1/13/00
407329	0002F015		WATER	1/13/00
407330	0002F016		WATER	1/13/00
407331	0002F017	Equipment Rinsate Blank	WATER	1/13/00
407439	0002F019	Full Validation Sample	WATER	1/14/00
407440	0002F020	Dup of 0002F019	WATER	1/14/00
407441	0002F021		WATER	1/14/00
407442	0002F022		WATER	1/14/00
407444	0002F023	Equipment Rinsate Blank	WATER	1/14/00
407437	0002P002A		WATER	1/14/00
407434	0002P011		WATER	1/14/00
407435	0002P012	Full Validation Sample	WATER	1/14/00
407435DP	0002P012D		WATER	1/14/00
407435MS	0002P012MS		WATER	1/14/00
407436	0002P014		WATER	1/14/00

TPHEXT

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407443	0002F009A		WATER	1/14/00
407328	0002F014		WATER	1/13/00
407329	0002F015		WATER	1/13/00
407330	0002F016		WATER	1/13/00
407331	0002F017	Equipment Rinsate Blank	WATER	1/13/00
407439	0002F019	Full Validation Sample	WATER	1/14/00
407440R1	0002F020	Dup of 0002F019	WATER	1/14/00
407441	0002F021		WATER	1/14/00
407442	0002F022		WATER	1/14/00
407444	0002F023	Equipment Rinsate Blank	WATER	1/14/00
407437	0002P002A		WATER	1/14/00
407434	0002P011		WATER	1/14/00
407435	0002P012	Full Validation Sample	WATER	1/14/00
407435MS	0002P012MS		WATER	1/14/00
407435MD	0002P012MSD		WATER	1/14/00
407436	0002P014		WATER	1/14/00

TPHPRG

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407443	0002F009A		WATER	1/14/00
407328	0002F014		WATER	1/13/00
407329	0002F015		WATER	1/13/00
407330	0002F016		WATER	1/13/00
407331	0002F017	Equipment Rinsate Blank	WATER	1/13/00
407439	0002F019	Full Validation Sample	WATER	1/14/00
407440	0002F020	Dup of 0002F019	WATER	1/14/00
407441	0002F021		WATER	1/14/00
407442	0002F022		WATER	1/14/00
407444	0002F023	Equipment Rinsate Blank	WATER	1/14/00
407437	0002P002A		WATER	1/14/00
407434	0002P011		WATER	1/14/00
407435	0002P012	Full Validation Sample	WATER	1/14/00
407435MS	0002P012MS		WATER	1/14/00
407435MSD	0002P012MSD		WATER	1/14/00
407436	0002P014		WATER	1/14/00

VOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
407328	0002F014		WATER	1/13/00
407329	0002F015		WATER	1/13/00
407330	0002F016		WATER	1/13/00
407331	0002F017	Equipment Rinsate Blank	WATER	1/13/00
407438	0002F018	Trip Blank	WATER	1/14/00
407439	0002F019	Full Validation Sample	WATER	1/14/00
407440	0002F020	Dup of 0002F019	WATER	1/14/00
407441	0002F021		WATER	1/14/00
407442	0002F022		WATER	1/14/00
407444	0002F023	Equipment Rinsate Blank	WATER	1/14/00
407459	0002P010	Trip Blank	WATER	1/14/00
407434	0002P011		WATER	1/14/00
407435	0002P012	Full Validation Sample	WATER	1/14/00
407435MS	0002P012MS		WATER	1/14/00
407435MD	0002P012MSD		WATER	1/14/00
407436	0002P014		WATER	1/14/00

All samples were received intact and properly labeled. Cooler temperatures were within 2 - 6° C upon arrival at the laboratory.

3.0 CLP Volatile Organics by GC/MS

3.1 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4);

Matrix: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0002F017	ACETONE	4 ✓	10 U4	UG/L
0002F023	ACETONE	6 ✓	10 U4	UG/L

According to the TtEMI Statement of Work for Hunters Point, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

3.2 Calibrations

Due to continuing calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

Date Analyzed: 1/20/00

Analyte	CC %D	Q
2-BUTANONE	35.5 ✓	J7 / UJ7
2-HEXANONE	37 ✓	J7 / UJ7
ACETONE	43.8 ✓	J7 / UJ7

Associated Samples: 0002F016, 0002F017, 0002P011, 0002P012

Date Analyzed: 1/21/00

Analyte	CC %D	Q
2-BUTANONE	45.5 ✓	J7 / UJ7
2-HEXANONE	43.5 ✓	J7 / UJ7
ACETONE	50.5 ✓	J7 / UJ7

Associated Samples: 0002P014, 0002F018, 0002F019, 0002F020, 0002F021, 0002F022, 0002F023, 0002P010

[1] According to the TtEMI Statement of Work for Hunters Point, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

3.3 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0002F017	CHLOROFORM	1	5	10	UG/L	J
0002F023	CHLOROFORM	1	6	10	UG/L	J
0002P011	TOLUENE	1	0.9	10	UG/L	J

[1] According to the TtEMI Statement of Work for Hunters Point, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

3.4 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were reported as non-detect for all target compounds.

Full Validation for Samples 0002F019 and 0002P014

3.5 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

System Performance

The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

4.0 CLP Semivolatile Organic Compounds by GC/MS

4.1 Calibrations

Due to initial calibrations problems, the following nondetected results are qualified as estimated (UJ7):

ICAL Date: 1/4/00	ICAL RSD	Q
Analyte		
2,4-DINITROPHENOL	34.2	J7 / UJ7

Associated Samples: 0002F019 0002F020 0002F021

[1] According to the TtEMI Statement of Work for Hunters Point, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

Calibrations

Due to continuing calibrations problems, the following nondetected results are qualified as estimated (UJ7):

Date Analyzed: 1/21/00	CC %D	Q
Analyte		
2,4-DICHLOROPHENOL	33.9	J7 / UJ7
2,4-DIMETHYLPHENOL	27.3	J7 / UJ7
3-NITROANILINE	28.1	J7 / UJ7
4-CHLOROANILINE	28.3	J7 / UJ7
4-NITROANILINE	26.8	J7 / UJ7

Associated Samples: 0002F019 0002F020 0002F021

[1] According to the TtEMI Statement of Work for Hunters Point, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

Full Validation for Sample 0002F019

4.2 GC/MS Tuning

The ion abundance criteria were met for the decafluorotriphenylphosphine (DFTPP) GC/MS performance checks. The sample was analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra and peak identifications of the sample were evaluated. Target compound identification was considered to be correct.

4.2 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits. All reported results reflect any dilutions and volumes used.

System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

5.0 CLP Organochlorine Pesticides/PCBs by GC/ECD

All cursory requirements were met by this method. ✓

5.1 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect or the RPD was less than 25% for all target analytes.

Full Validation for Sample 0002F019

5.2 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

6.0 TPH Extractables by GC/FID (Modified SW8015)

6.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

Extraction blank result < R.L.

Matrix: WATER
Prep Date: 1/21/00
Analysis Date: 1/21/00

Blank ID	Analyte	Result	RL	Units
EBLKY8	MOTOR OIL	0.08	0.1	MG/L

Associated Results:			Qualified Result			
0002F014	WATER	MOTOR OIL	0.1	U1	0.1	MG/L
0002P011	WATER	MOTOR OIL	0.2	U1	0.1	MG/L
0002P014	WATER	MOTOR OIL	0.1	U1	0.1	MG/L
0002F009A	WATER	MOTOR OIL	0.2	U1	0.1	MG/L

According to the TtEMI Statement of Work for Hunters Point, if a target analyte is found in any blank at a level > RL, all associated results <5X the amount found shall be qualified as nondetected at the level detected (U1).

RWQCB Screening criteria: 1,250 ug/L (1.25 mg/L)

6.2 Field Duplicates

One set of field duplicates was collected for analysis by this method. The following results were found:

	Primary Sample		*Dup Sample*			
	0002F019		0002F020			
Analyte	**Result**	**RL**	**Result**	**RL**	**Units**	**RPD**
DIESEL FUEL	0.1 U	0.1	0.1 U	0.1	MG/L	NC
MOTOR OIL	0.6 ML	0.1	0.4 MLZ	0.1	MG/L	40

Sample results are not qualified on the basis of field duplicate precision.

Full Validation for Samples 0002F019 and 0002P012

6.3 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

7.0 TPH Purgeables by GC/FID (Modified SW8015)

All cursory requirements were met by this method. ✓

7.1 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were reported as non-detect for TPH purgeables.

Full Validation for Samples 0002F019 and 0002P012

7.2 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

8.0 CLP Metals

8.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

Matrix: WATER

Analysis Date: 2/3/00

Blank ID	Analyte	Result	DL	Units
CCB	ALUMINUM	33.8	15.5	UG/L
CCB	ARSENIC	4.6	2.5	UG/L
ICB	BERYLLIUM	0.4	0.1	UG/L
ICB	CADMIUM	0.2	0.2	UG/L
CCB	CHROMIUM	2.4	1	UG/L
CCB	COPPER	2.5	1.9	UG/L
CCB	SILVER	1.6	1.3	UG/L

Affected Samples:			Qualified Result		Units
0002F015	WATER	ALUMINUM	15.6	U1	UG/L
0002F022	WATER	ARSENIC	2.8	U1	UG/L
0002F014	WATER	ARSENIC	3.1	U1	UG/L
0002F016	WATER	ARSENIC	3.7	U1	UG/L
0002F019	WATER	ARSENIC	8.4	U1	UG/L
0002F020	WATER	ARSENIC	6.6	U1	UG/L
0002P011	WATER	ARSENIC	4.4	U1	UG/L
0002F021	WATER	ARSENIC	14.2	U1	UG/L
0002P002A	WATER	ARSENIC	6.2	U1	UG/L
0002F014	WATER	BERYLLIUM	0.21	U1	UG/L
0002F019	WATER	BERYLLIUM	0.23	U1	UG/L
0002F020	WATER	BERYLLIUM	0.21	U1	UG/L
0002F021	WATER	BERYLLIUM	0.23	U1	UG/L
0002F022	WATER	BERYLLIUM	0.54	U1	UG/L
0002P012	WATER	BERYLLIUM	0.17	U1	UG/L
0002P014	WATER	BERYLLIUM	0.31	U1	UG/L
0002P011	WATER	BERYLLIUM	0.53	U1	UG/L
0002P002A	WATER	BERYLLIUM	1.5	U1	UG/L
0002P014	WATER	CADMIUM	0.58	U1	UG/L
0002P002A	WATER	CHROMIUM	2.6	U1	UG/L
0002P014	WATER	CHROMIUM	8.4	U1	UG/L
0002F022	WATER	CHROMIUM	1	U1	UG/L
0002F014	WATER	CHROMIUM	6.5	U1	UG/L
0002P014	WATER	COPPER	6	U1	UG/L
0002F014	WATER	COPPER	6.1	U1	UG/L
0002P012	WATER	COPPER	4.5	U1	UG/L
0002F021	WATER	COPPER	2.1	U1	UG/L
0002F009A	WATER	COPPER	2.2	U1	UG/L
0002F019	WATER	COPPER	2.2	U1	UG/L
0002P002A	WATER	COPPER	8	U1	UG/L
0002F015	WATER	COPPER	8.6	U1	UG/L
0002F014	WATER	SILVER	1.4	U1	UG/L
0002P014	WATER	SILVER	6.2	U1	UG/L

8.1 Blanks (cont.)

Matrix: WATER
Prep Date: 1/27/00

Blank ID	Analyte	Result	DL	Units
PBW11	MERCURY	0.134 ✓	0.1	UG/L
	MOLYBDENUM	1.835 ✓	0.9	UG/L

Affected Samples:			Qualified Result		
0002P014	WATER	MERCURY	0.12	U1	UG/L
0002P002A	WATER	MERCURY	0.14	U1	UG/L
0002F019	WATER	MERCURY	0.15	U1	UG/L
0002F021	WATER	MERCURY	0.27	U1	UG/L
0002F009A	WATER	MERCURY	0.19	U1	UG/L
0002F014	WATER	MOLYBDENUM	8.5	U1	UG/L
0002F015	WATER	MOLYBDENUM	5.1	U1	UG/L
0002F016	WATER	MOLYBDENUM	2	U1	UG/L
0002P011	WATER	MOLYBDENUM	2.5	U1	UG/L
0002P012	WATER	MOLYBDENUM	3.2	U1	UG/L
0002P014	WATER	MOLYBDENUM	5.4	U1	UG/L
0002P002A	WATER	MOLYBDENUM	6.2	U1	UG/L
0002F019	WATER	MOLYBDENUM	3.2	U1	UG/L
0002F020	WATER	MOLYBDENUM	3.4	U1	UG/L
0002F021	WATER	MOLYBDENUM	6.8	U1	UG/L
0002F022	WATER	MOLYBDENUM	3.2	U1	UG/L
0002F009A	WATER	MOLYBDENUM	4.9	U1	UG/L
0002F023	WATER	MOLYBDENUM	1	U1	UG/L

According to the TtEMI Statement of Work for Hunters Point, if a target analyte is found in any blank at a level > DL, all associated results <5X the amount found shall be qualified as nondetected at the level detected (U1). If any target analytes are detected in any blank at a level > CRDL, all associated results must be > 10X the amount found in the blank or all associated batch samples should be redigested and reanalyzed.

8.1 Blanks (cont.)

Due to negative drift observed in laboratory blanks, the following results are considered estimated (J1 / UJ1):

Matrix: WATER
Prep Date: 1/27/00
Analysis Date: 1/27/00

Blank ID	Analyte	Result	DL	Units
ICB	IRON	-90.4	20.3	UG/L
PBW11	POTASSIUM	-335.7	169	UG/L
CCB	SELENIUM	-3.2	2.2	UG/L
CCB	SODIUM	-1359	289	UG/L
PBW11	THALLIUM	-6.32	3.2	UG/L

Associated Results:			Qualified Result		Units
0002F023	WATER	IRON	56.7	J1	UG/L
0002P014	WATER	IRON	20.3	UJ1	UG/L
0002F016	WATER	IRON	148	UJ1	UG/L
0002F022	WATER	IRON	403	J1	UG/L
0002P012	WATER	IRON	23.6	J1	UG/L
0002F014	WATER	IRON	20.3	UJ1	UG/L
0002F015	WATER	IRON	20.3	UJ1	UG/L
0002P011	WATER	IRON	71.3	J1	UG/L
0002F017	WATER	IRON	20.3	UJ1	UG/L
0002P002A	WATER	IRON	148	UJ1	UG/L
0002F017	WATER	POTASSIUM	169	UJ1	UG/L
0002F023	WATER	POTASSIUM	169	UJ1	UG/L
0002F015	WATER	SELENIUM	2.2	UJ1	UG/L
0002P014	WATER	SELENIUM	2.2	UJ1	UG/L
0002F017	WATER	SELENIUM	2.2	UJ1	UG/L
0002F016	WATER	SELENIUM	2.2	UJ1	UG/L
0002F019	WATER	SELENIUM	2.2	UJ1	UG/L
0002F020	WATER	SELENIUM	2.2	UJ1	UG/L
0002F023	WATER	SELENIUM	2.2	UJ1	UG/L
0002F009A	WATER	SELENIUM	2.2	UJ1	UG/L
0002P012	WATER	SELENIUM	2.2	UJ1	UG/L
0002F022	WATER	SELENIUM	2.2	UJ1	UG/L
0002P011	WATER	SELENIUM	2.2	UJ1	UG/L
0002F014	WATER	SELENIUM	2.2	UJ1	UG/L
0002P002A	WATER	SELENIUM	2.2	UJ1	UG/L
0002F021	WATER	SELENIUM	2.2	UJ1	UG/L
0002F017	WATER	SODIUM	289	UJ1	UG/L
0002F023	WATER	SODIUM	289	UJ1	UG/L
0002F014	WATER	THALLIUM	11.5	J1	UG/L
0002F009A	WATER	THALLIUM	3.2	UJ1	UG/L
0002F015	WATER	THALLIUM	3.2	UJ1	UG/L
0002F016	WATER	THALLIUM	3.2	UJ1	UG/L
0002F017	WATER	THALLIUM	3.2	UJ1	UG/L
0002F019	WATER	THALLIUM	3.2	UJ1	UG/L

Associated Results:			Qualified Result		Units
0002F021	WATER	THALLIUM	3.2	UJ1	UG/L
0002P014	WATER	THALLIUM	5.3	J1	UG/L
0002F022	WATER	THALLIUM	3.2	UJ1	UG/L
0002F023	WATER	THALLIUM	3.2	UJ1	UG/L
0002P002A	WATER	THALLIUM	5.3	J1	UG/L
0002P011	WATER	THALLIUM	3.2	UJ1	UG/L
0002P012	WATER	THALLIUM	3.2	UJ1	UG/L
0002F020	WATER	THALLIUM	3.2	UJ1	UG/L

According to the TtEMI Statement of Work for Hunters Point, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if negative drift >IDL is found, qualify all nondetected and detected results < 5X the absolute blank value as estimated (J1/UJ1).

8.2 Matrix Spikes

Due to accuracy problems in the MS analysis, the following nondetected results are qualified as estimated (UJ3):

MS Batch ID:	PBW11	**Dil Factor:**	1
MS/MSD ID:	0002P012MS	**Prep Date:**	1/27/00
Spiked Sample:	407435MS	**Analysis Date:**	2/3/00
Matrix:	WATER		

Analyte	% Recovery	Limits [1]	Q [2]
LEAD	73.3	75 - 125	J3/UJ3

Associated samples:			
	0002F014	0002F015	0002F016
	0002F017	0002P011	0002P012
	0002P014	0002P002A	0002F019
	0002F020	0002F021	0002F022
	0002F009A	0002F023	

[1] Project-established Limits

[2] According to the Statement of Work for Hunters Point, if the MS or MSD recovery is < LCL, flag detected results for that analyte J3 and flag nondetects UJ3; for metals, qualifiers apply to all batch samples

8.3 ICP Serial Dilution

Due to ICP serial dilution problems, detected results for the following associated samples are qualified as estimated (J4):

Prep Batch ID: PBW11
Prep Date: 1/27/00

SD Sample	Analyte	Sample Value (µg/L)	50X IDL	SD %D	Q [1]
0002P012	SODIUM	94000	14450	64.4	J4

Associated Samples:

0002F014	0002F015	0002F016
0002F017	0002P011	0002P012
0002P014	0002P002A	0002F019
0002F020	0002F021	0002F022
0002F009A	0002F023	

[1] According to the TtEMI Statement of Work, if the %D for any analyte is >10%, and the original sample result is > 50X the IDL, flag associated sample results J4 (only applies to detects)

Similar interference to sample in SDG# 76600.

8.4 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	Units	Q [1]
0002F009A	ANTIMONY	1	7.1	UG/L	J
0002F009A	IRON	10	482	UG/L	J
0002F009A	NICKEL	1	7.3	UG/L	J
0002F009A	POTASSIUM	1	1840	UG/L	J
0002F009A	VANADIUM	1	4.2	UG/L	J
0002F014	ANTIMONY	1	7.2	UG/L	J
0002F014	CADMIUM	1	1.3	UG/L	J
0002F015	ANTIMONY	1	3.5	UG/L	J
0002F015	NICKEL	1	3.1	UG/L	J
0002F015	VANADIUM	1	15.2	UG/L	J
0002F016	ANTIMONY	1	8.7	UG/L	J
0002F016	COBALT	1	2	UG/L	J
0002F016	NICKEL	1	22.4	UG/L	J
0002F017	ZINC	1	1.9	UG/L	J
0002F019	ANTIMONY	1	8	UG/L	J
0002F019	NICKEL	1	2.1	UG/L	J
0002F019	VANADIUM	1	2.8	UG/L	J
0002F020	ANTIMONY	1	6.2	UG/L	J
0002F021	ANTIMONY	1	4	UG/L	J
0002F021	NICKEL	1	2.1	UG/L	J
0002F022	ANTIMONY	1	3.4	UG/L	J
0002F022	COBALT	1	6.6	UG/L	J
0002F022	NICKEL	1	33.9	UG/L	J
0002F023	MANGANESE	1	0.7	UG/L	J
0002F023	ZINC	1	2.3	UG/L	J
0002P002A	ANTIMONY	1	4.2	UG/L	J
0002P002A	COBALT	1	11.7	UG/L	J
0002P002A	POTASSIUM	1	2450	UG/L	J
0002P002A	VANADIUM	1	4.4	UG/L	J
0002P011	ANTIMONY	1	6.1	UG/L	J
0002P011	COBALT	1	5.8	UG/L	J
0002P011	NICKEL	1	35.3	UG/L	J
0002P012	ANTIMONY	1	2.9	UG/L	J
0002P012	NICKEL	1	3.5	UG/L	J
0002P012	VANADIUM	1	2	UG/L	J
0002P014	ANTIMONY	1	8.3	UG/L	J
0002P014	COBALT	1	3	UG/L	J
0002P014	NICKEL	1	36.9	UG/L	J
0002P014	VANADIUM	1	6.1	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

8.5 Field Duplicates

One set of field duplicates was collected for analysis by these methods. The following results were found:

	Primary Sample 0002F019			*Dup Sample* 0002F020				
	Result		**DL**	**Result**		**DL**	**Units**	**RPD**
TMETAL								
ALUMINUM	15.5	U	15.5	15.5	U	15.5	UG/L	NC
ANTIMONY	8	B	2.2	6.2	B	2.2	UG/L	25
ARSENIC	8.4	B	2.5	6.6	B	2.5	UG/L	24
BARIUM	549		7.6	637		7.6	UG/L	15
BERYLLIUM	0.23	B	0.1	0.21	B	0.1	UG/L	9
CADMIUM	0.2	U	0.2	0.2	U	0.2	UG/L	NC
CALCIUM	169000		151	166000		151	UG/L	2
CHROMIUM	1	U	1	1	U	1	UG/L	NC
COBALT	1.3	U	1.3	1.3	U	1.3	UG/L	NC
COPPER	2.2	B	1.9	1.9	U	1.9	UG/L	15
IRON	834		20.3	736		20.3	UG/L	12
LEAD	1.3	UN	1.3	1.3	UN	1.3	UG/L	0
MAGNESIUM	68400		327	69800		327	UG/L	2
MANGANESE	833		0.6	837		0.6	UG/L	0
MERCURY	0.15	B	0.1	0.1	U	0.1	UG/L	40
MOLYBDENUM	3.2	B	0.9	3.4	B	0.9	UG/L	6
NICKEL	2.1	B	1.7	1.7	U	1.7	UG/L	21
POTASSIUM	16100		169	16200		169	UG/L	1
SELENIUM	2.2	UN	2.2	2.2	UN	2.2	UG/L	0
SILVER	1.3	U	1.3	1.3	U	1.3	UG/L	NC
SODIUM	140000		2890	160000		2890	UG/L	13
THALLIUM	3.2	U	3.2	3.2	U	3.2	UG/L	NC
VANADIUM	2.8	B	1.8	1.8	U	1.8	UG/L	43
ZINC	178		1.9	138		1.9	UG/L	25

Sample results are not qualified on the basis of field duplicate precision.

Full Validation for Samples 0002F019 and 0002P012

8.6 Analyte Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions or volumes used.

9.0 Overall Assessment of Data

Usability

Due to calibration problems in the volatiles analyses, detected and nondetected 2-butanone, 2-hexanone and acetone results for twelve samples are qualified as estimated. Due to common laboratory contamination, detected acetone results for two samples are qualified as nondetected.

Due to calibration problems in the semivolatiles analyses, nondetected 2,4-dinitrophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 3-nitroaniline, 4-nitroaniline and 4-chloroaniline results for three samples are qualified as estimated.

Due to laboratory blank contamination in the TPH-extractables analyses, motor oil results for four samples are qualified as nondetected.

Due to laboratory blank contamination in the metals analyses, aluminum and cadmium results for one sample, arsenic results for eight samples, beryllium results for nine samples, chromium results for four samples, copper results for eight samples, silver results for two samples, mercury results for five samples and molybdenum results for thirteen samples are qualified as nondetected. Due to laboratory blank negative drift, selenium and thallium results for fourteen samples, iron results for ten samples, potassium and sodium results for two samples are qualified as estimated. Due to poor serial dilution precision, detected sodium results for twelve samples are qualified as estimated. Due to matrix spike precision problems, nondetected lead results for fourteen samples are qualified as estimated.

The quality control reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the absence of rejected data and the small number of qualifiers added to the data indicate high usability.

10.0 References

"Data Validation Guidelines for CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for Non-CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Organic Data Review" (February 1994)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

76626

Data Quality Summary

Sample Delivery Group

76626

VOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**476**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**39**	8.2%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U4J7 - Multiple Reasons	2	0.4%	5.1%	H
J - Result is > the MDL but < the PQL	3	0.6%	7.7%	N
UJ7 - Compound is estimated due to cal. exceedance	34	7.1%	87.2%	N

Data Quality Summary

Sample Delivery Group

76626

SVOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**192**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**15**	7.8%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
UJ7 - Compound is estimated due to cal. exceedance	15	7.8%	100.0%	N

Data Quality Summary

Sample Delivery Group

76626

PEST

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**84**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**0**	0.0%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

Data Quality Summary

Sample Delivery Group

76626

TPHEXT

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**28**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**4**	14.3%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Compound is nondetected due to lab blank contamination	4	14.3%	100.0%	H

Data Quality Summary

Sample Delivery Group

TPHPRG

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**14**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**0**	0.0%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

Data Quality Summary

Sample Delivery Group

76626

TMETAL

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**336**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**142**	42.3%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
J1 - Analyte is estimated due to negative drift	7	2.1%	4.9%	H
U1 - Analyte is nondetected due to laboratory blank contamination	51	15.2%	35.9%	H
UJ1 - Analyte is estimated due to negative drift	19	5.7%	13.4%	H
UJ3 - Analyte is estimated due to surr/MS/LCS exceedance	14	4.2%	9.9%	L
J - Result is > the MDL but < the PQL	39	11.6%	27.5%	N
J4 - Analyte is estimated due to serial dilution exceedance	12	3.6%	8.5%	N

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/23/00 by Romeon Moffi/T+EMI

Hunters Point Shipyard

Parcel B Ramp Wells

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
143095

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
143095-001	9950F001	Full Validation Sample	WATER	12/17/99
QC103836	9950F001MS		WATER	12/17/99
QC103837	9950F001MSD		WATER	12/17/99

All samples were received intact and properly labeled. Cooler temperatures were not recorded on the chain-of-custody and the sample receipt form was not included with this sample delivery group.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

Full Validation for Sample 9950F001

3.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

143095

Data Quality Summary

Sample Delivery Group

143095

CHROM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	1	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/23/00 by Ramon Morgi/TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
143360

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
143360-001	0002F002		WATER	1/11/00
QC105315	0002F002MS		WATER	1/11/00
QC105316	0002F002MSD		WATER	1/11/00
143360-002	0002F003		WATER	1/11/00
143360-003	0002F004		WATER	1/11/00
143360-004	0002F005	Equipment Rinsate Blank	WATER	1/11/00

All samples were received intact and properly labeled. Cooler temperatures were not recorded on the chain-of-custody and the sample receipt form was not included with this sample delivery group.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method. Full validation was not required for this sample delivery group.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory review all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

143360

Data Quality Summary

Sample Delivery Group

143360

CHROM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	4	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/23/00 by Romeen Moezzi/TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
143382

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
143382-001	0002F007		WATER	1/12/00
QC105387	0002F007MS		WATER	1/12/00
QC105388	0002F007MSD		WATER	1/12/00
143382-002	0002F008		WATER	1/12/00
143382-003	0002F010	Full Validation Sample	WATER	1/12/00
143382-004	0002F011	Equipment Rinsate Blank	WATER	1/12/00

All samples were received intact and properly labeled. Cooler temperatures were not recorded on the chain-of-custody and the sample receipt form was not included with this sample delivery group.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

Full Validation for Sample 0002F010

3.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

143382

Data Quality Summary

Sample Delivery Group

143382

CHROM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	4	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/23/00 by Romeen Mollazi/TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
143411

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Jan Heath

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
143411-001	0002F013		WATER	1/13/00
QC105462	0002F013MS		WATER	1/13/00
QC105463	0002F013MSD		WATER	1/13/00
143411-002	0002F014		WATER	1/13/00
143411-003	0002F015		WATER	1/13/00
143411-004	0002F016		WATER	1/13/00
143411-005	0002F017		WATER	1/13/00
143411-006	0002P003A	Full Validation Sample	WATER	1/13/00
143411-007	0002P005A		WATER	1/13/00
143411-008	0002P007		WATER	1/13/00
143411-009	0002P008	Dup of 0002P007	WATER	1/13/00
143411-010	0002P009	Full Validation Sample	WATER	1/13/00

All samples were received intact and properly labeled. Cooler temperatures were not recorded on the chain-of-custody and the sample receipt form was not included with this sample delivery group.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

Full Validation for Samples 0002P003A and 0002P009

3.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

143411

Data Quality Summary

Sample Delivery Group

143411

CHROM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	10	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/23/00 by Romeen Mogg/TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
143428

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of CTO 270, Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
143428-005	0002F009A		WATER	1/14/00
143428-001	0002F019	Full Validation Sample	WATER	1/14/00
143428-002	0002F020	Dup of 0002F019	WATER	1/14/00
143428-003	0002F021		WATER	1/14/00
143428-004	0002F022		WATER	1/14/00
143428-006	0002F023	Equipment Rinsate Blank	WATER	1/14/00
143428-011	0002P002A		WATER	1/14/00
143428-007	0002P011		WATER	1/14/00
143428-008	0002P012	Full Validation Sample	WATER	1/14/00
QC105556	0002P012MS		WATER	1/14/00
QC105557	0002P012MSD		WATER	1/14/00
143428-010	0002P014		WATER	1/14/00

All samples were received intact and properly labeled. Cooler temperatures were not recorded on the chain-of-custody and the sample receipt form was not included with this sample delivery group.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

Full Validation for Samples 0002F019 and 0002P012

3.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

143428

Data Quality Summary

Sample Delivery Group

143428

CHROM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**10**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**0**	0.0%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL